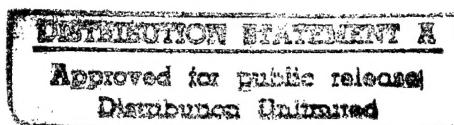


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USSR Report

AGRICULTURE

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5 October 1984

USSR REPORT
AGRICULTURE

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MAJOR CROP PROGRESS AND WEATHER REPORTING

USSR-CZECHOSLOVAKIAN COOPERATION IN HARVESTING

Moscow SEL'SKAYA ZHIZN' in Russian 5 Aug 84 p 1

[Article by I. Gemakovskiy, Transcarpathian Oblast: "That Is Truly Neighborly!"]

[Text] In Transcarpathia grains mature somewhat earlier than on the state farms and cooperatives of neighboring Eastern Slovatskiy Kray of the Czechoslovakian SSR. This fact was utilized by enterprises in a neighborly manner. Czechoslovakian combine operators come to help their Soviet friends with harvesting and then Transcarpathian workers make a "return visit" to their neighbors. This type of joint cooperation, apart from demonstrating neighborliness, is economically advantageous because it allows for a more efficient utilization of time and equipment and avoids losses during harvesting and during the shipment of the harvest.

Forty Czech combine crews are working in the fields of Mukachevskiy and Uzhgorodskiy rayons for the sixteenth time. During many years of cooperative work, the adopted brothers from Czechoslovakia have understood well the special features of the harvest in Transcarpathia and they have learned to maneuver equipment under bad-weather conditions. Yet again frequent rains and winds have caused grain lodging on large areas. Through joint efforts machine operators reequipped combines and are improving harvesting techniques and methods.

"We are working at the lowest cutting line and we are striving to harvest everything down to the last spike and grain. The guarantee of success is the Ipatov method of using harvesting-transport detachments and our indestructable friendship," say brothers Stanislav and Pavel Koropetskiy, who came to Transcarpathia from Pervyy May Cooperative of Pryashevskiy Okrug in Czechoslovakia.

The Koropetskiy brothers are now competing with the family team of Vasiliy and Ivan Zozul, which includes wives Maria and Irina. An attentive and sensitive attitude toward partners in competition and mutual aid help to overcome the caprices of nature and to achieve high work quality. Czech combine operators are successfully fulfilling plan goals and are threshing 40 quintals of grain per hectare and more. They have been awarded the transition red banner saying, "Victor in 1984 International Harvest."

The harvest is coming to an end in Transcarpathia. In the best of the oblast's enterprises 45 quintals per hectare and more are being harvested. According to the calculations of specialists, the grain harvest in the oblast as a whole is significantly greater than last year's.

After combines tractor units entered the fields and the preparation of the soil for the future harvest has begun.

In several days the harvest-transport detachments of Transcarpathians will move into the fields of Gumenskiy and Pryashevskiy okrugs of our fraternal country. Following the example of Soviet machine operators our neighbors also utilize the Ipatov harvesting method, create temporary party and komsomol groups everywhere and create propaganda cars and trains.

Joint work by Soviet and Czech machine operators to harvest grains attests to further development of economic and cultural cooperation and the growing friendship of two fraternal peoples.

8228

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRYANSK OBLAST POTATO PRODUCTION PLANS

Moscow SEL'SKAYA ZHIZN' in Russian 15 May 84 p 1

/Article by A. Glazkov, Bryansk Oblast: "On the Potato Fields"

/Text/ The conversion of production subunits on farms in Bryansk Oblast over to the use of the collective contract and the increasing amount of attention being given by the APO /agroindustrial association/ to the needs of kolkhozes and sovkhozes which earlier were considered to have fallen behind in their operations -- these are factors which are producing fine results.

Two events coincided in time: the awarding to Bryansk Oblast of the Challenge Red Banner of the RSFSR Council of Ministers and the AUCCTU for having obtained high yields and increasing the production and sale of potatoes to the state during 1983 and the planting of this crop. By way of responding to this award, the experts at growing this secondary grain crop have adopted high obligations and they are carrying out their field work in all areas in a highly organized and rapid manner.

"Almost 70 percent of the areas set aside for potatoes have been turned over to mechanized subunits which have converted over to use of the collective contract" stated the 2d secretary of the Bryansk Oblast CPSU Committee G.S. Kabasin. Moreover, the quality of the work has improved and a broad expanse has opened up for displaying initiative."

The example set by a number of farms readily convinces one of this fact. At the Reshitel'nyy Kolkhoz in Novozybkovskiy Rayon, an efficient technology has been developed and the best varieties selected. It would seem that all reserves have been placed in operation. But the specialists were able to find one more: in order to obtain healthy seedlings, they began treating the tubers with a growth stimulator prior to planting.

The soil at the Reshitel'nyy Kolkhoz is sandy and thus it requires a good top dressing of organic material. This spring period, an especially dry one, the machine operators are striving to retain the moisture in the soil to a better degree than they have in past years. The autumn plowed land has been harrowed completely and a front of work has been prepared for those units engaged in carrying out the planting work.

The teams of the kolkhozes Komsomolets and Leninskiy Put', the Volna Revolyutsii Experimental-Production Farm and others are working in a very productive manner. They are devoting priority attention to the planting of tubers for early ripening varieties.

The Klimovskiy and Pogar kolkhozes and sovkhozes are intensifying their work out on the potatoe fields.

In Pochevskiy Rayon, special attention is being given to seed production. Three large sovkhozes are specializing in the growing of seed for high reproductions, for delivery to farms throughout the oblast. The rayon agro-industrial association is exercising control over the course of the field work. Its chairman, A.S. Subbotin, stated:

"Dispatcher communications commences at 0600 in the morning. The problems which arise are solved in an efficient manner; machines for providing technical assistance, accompanied by repair brigades, are sent out onto the fields as requested. In short, during the peak period of the spring field operations, subunits of the agroindustrial complex carry out a serious check on the ability to operate under the new conditions."

Increased attention has been given to remote weak farms, with assistance being given to them for preparing their equipment and renewing their seed material.

Special attention is also being given in other regions to seed production for potatoes -- a new system is being employed for intra-farm seed production: potato production kolkhozes and sovkhozes are acquiring elite tubers at the rate of 5 tons for each 100 hectares of sowing and reproduction nurseries and seed-breeding plots are being planted. And the results are readily apparent in those areas where this work is being carried out in a persistent manner. Last year the Komsomolets Kolkhoz in Novozybkovskiy Rayon obtained 275 quintals of tubers per hectare; the kolkhozes Bol'shevik and Druzhba in Pogarskiy Rayon obtained 250 quintals. And this spring the Pogar farms once again procured fine seed for themselves.

However, a considerable amount of work still remains to be carried out if improvements are to be realized in seed production work. Whereas throughout the oblast as a whole the potato planting areas for tubers of low reproductions were reduced by more than 10 percent, in Unechskiy, Kletnyanskiy, Surazhskiy and Krasnogorskiy rayons their proportion is still high just as in the past.

Here the teams, brigades and the agronomic service are not displaying the required degree of responsibility with regard to obtaining 1st class seed. The production base for the leading seed production sovkhozes Baklan' and Pervomayskiy must be strengthened. There is also the problem of increasing the production of potato storehouses.

The oblast and rayon agroindustrial associations are striving to obtain solutions for these problems. This year the Bryansk farmers plan to obtain 150 quintals of tubers from each of 116,000 hectares and to sell 740,000 tons of potatoes to the state.

MAJOR CROP PROGRESS AND WEATHER REPORTING

HARVEST PROGRESS, PROBLEMS IN ODESSA OBLAST

Moscow TRUD in Russian 24 Jul 84 p 1

[Article by V. Bessonov, chairman of the rayon committee of the trade union for agricultural workers, Bolgradskiy Rayon, Odessa Oblast: "Quality Posts in the Fields"]

[Text] The grain farmers of our rayon cultivated an adequate harvest of grains this year. We plan to harvest no fewer than 30 quintals of wheat per hectare. It is true that harvest work has been interrupted by rain, which began on the eve of harvesting operations and has not ended yet. An everyday wisdom has been confirmed: "Not the grain in the fields but that in granaries is what counts." In the rayon a slogan has appeared: "A roof for grain!" The elevator is one thing, there everything is dependable. But what are we going to do with barley and peas? They were harvested from an area of 3,000 hectares. Another thousand is left. It was clear that equipment could not go into the fields because it would get stuck in the muddy soil. Then the rayon agro-industrial association and the raykom of the trade union for agricultural workers organized manual harvesting. All village residents, including upper class students, went out into the fields.

Peas were brought to threshing floors and placed under awnings. Dryers were put into operation, but there turned out to be a shortage of them. It was necessary to use all garret floors in livestock-raising facilities and other buildings to dry peas. Additional covered platforms were equipped immediately. The battle for grain is not over yet. But it is already clear that many enterprises in the rayon have been able to counteract bad weather with experience and skill.

The basic grain--winter wheat--has moved to state granaries. Our main concern is to collect and preserve the harvest. What measures are being taken to harvest and thresh grain on time and without losses? In early June RAPO [Rayon Agro-Industrial Association] specialists, trade union activists and people's controllers checked the quality of harvest equipment, transport vehicles and scales in grain-reception enterprises. We also organized raid brigades along the route threshing floor-elevator. They include representatives of agriculture, of the trade union committee in the enterprise, of people's controllers and of GAI [State Automobile Inspection] workers.

Each kolkhoz and sovkhoz has created posts for the preservation of the harvest on threshing floors, in fields, in truck garages and in grain-reception points. Their task is to avoid losses. This is how they operate in the Kolkhoz imeni Kalinin. We traveled around the fields with the chairman of the trade union committee, Ye. Sakaly, and saw how strictly they watch to make sure that grain does not remain in swathes for too long. A precise conveyor is in operation in the enterprise--from the field the grain is taken immediately, without delay, to the threshing floor, where canopies are put up for drying it.

In this enterprise quality posts have great authority. The controllers of reports do not write about what has been noted; they tell the entire brigade at shift change. In case of difficulties they turn to brigade leaders or the kolkhoz chairman. The main thing is to solve the problem efficiently. Controllers discovered that in one combine the reel cantilever was bent and that the grain elevator had cracks. The combiner was reprimanded and helped to repair the machine then and there. The same kind of control exists in the fields. At the present time the report on the acceptance of a field is not valid without the signature of controllers. Without this report a machine operator does not receive his wages.

Such is the custom that those who are called upon to preserve the grain remain in the shadows. Little is said or written about them. Usually their shortcomings are complained about and their achievements seem not to interest anyone. This year we are widely publicizing the work of those who work in grain-reception enterprises. Thus, in the rayon newspaper DRUZHBA there will be a regular column discussing "the preservers of the grain."

The rayon committee of the trade union for agricultural workers and the RAPO constantly support every valuable beginning, which can and must gladden man and be universally useful. For example, we value highly the obligation of the collective in the grain-reception enterprise to build additional covered platforms for the reception of grain.

The flow of grain is increasing. It needs dependable cover. Not a single kilogram of grain should remain in the fields. It is for the sake of this that our grain farmers work. This year the rayon must sell the state over 70,000 tons of grain. Farmers are doing everything to fulfill their obligations.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

HARVEST PROGRESS, PROBLEMS IN SOUTHERN UKRAINE

Moscow SEL'SKAYA ZHIZN' in Russian 21 Jul 84 p 1

[Article by A. Soldatskiy, Nikolayev-Kherson oblasts: "After the Combine--Losses"]

[Text] In a number of enterprises in the southern Ukraine the harvest experience of leaders is underestimated, there are cases of a lack of organization in harvesting operations and grain losses are tolerated.

I met the director of the Sovkhoz imeni Chapayev of Nikolayev Oblast, S. M. Bleshchak, in the peas field. Stepan Mikhaylovich said then that 2 days before there had been rain and that machine operators were waiting for good weather. But that day in neighboring Kolkhoz imeni Engels as well as in other enterprises of Berezanskiy Rayon spike crops were being placed into windrows at full speed.

A week passed and I again went to that field at 3 in the afternoon. Everything there was practically unchanged although three combines had appeared and were placing peas into swathes. A fourth stood by the road and the machine operators hid under it in the shade.

"I thought maybe you brought the auto oil," said combine operator A. Fedenishin, looking at me with vexation.

A hose had broken in the combine's hydraulic system and the oil had poured out. Section director S. Klimyuk had been here; two technical service trucks had passed and master A. Sen'ko from Berezanskaya Sel'khoztekhnika [Agricultural Equipment Association] came out. After learning that there was no oil he said that was not his problem. If a spare part had been needed he would have looked for one.

"Did you start harvesting the peas a long time ago?" I asked.

"Yesterday after lunch we came out for a test run. We thought we'd work at full speed today."

That day A. Fedenishin's unit remained idle for over 3 hours, and only 700 meters from the office.

In the sovkhoz, as in all of Nikolayev Oblast, it is planned to complete the harvesting of early grains in 13 days. The trouble is, we don't know when to start counting. A considerable amount of time has gone by, but the pace of harvesting is very low. In the first section that day out of 9 combines 3 remained idle due to various breakages and two of these had been this way for several days.

The situation is no better in the second section although harvesting of peas fields has begun and the first grain of the new harvest was collected. It would seem that at this particular time sovkhoz directors would be around. Their purpose in being there would not be celebration but to check on how threshing is going and on its quality. But there was no one there, including controllers, of whom so much is said in Berezanskiy Rayon. Had they been there perhaps S. Gorba might not have risked leaving several dozen kilograms of grain on the ground while cleaning his combine.

The discussion about losses is special. If one stops amidst mowed down windrows one can hear the ceaseless crackling of pods. This is the sun "threshing" peas. In the first section some of the crop was harvested 11 days ago, but despite the fact that losses were growing with each hour combines never did go out to collect it.

And where are those famous mechanized detachments of which people like to talk in Nikolayev Oblast? In Sovkhoz imeni Chapayev 1-3 combines work on various fields, and there can be no talk at all about complexes involved in harvesting.

There are two Nivas standing near the repair shop. One has been repaired, the other is new. It was delivered 1 month ago.

"Why are the machines standing idle?" I ask the director of the section, A. Logvinov.

"We don't have the people."

There is a shortage of cadres in the sovkhoz. Eleven machine operators came from Nikolayev to help. But not even the basic amenities were created for them. That day 6 combines remained idle in the sovkhoz for various reasons.

This enterprise is no exception. In Primor'ye Sovkhoz during the heat of harvesting shops were still just preparing units for entering the fields. Almost every other one broke down during the first few days of harvesting, the result of poor quality repair work. In the Kolos Sovkhoz, located on the opposite end of the oblast, peas occupy 800 hectares. It would seem that with 24 combines it would be possible to send some of them to do combining work and the rest to perform mowing operations in a 2-3 days. But here a different decision was made. Ten combines were allocated for harvesting peas. First they put the mass into windrows and then they were reequipped for collection. During that time strong winds began to blow and the windrows became twisted.

The heat and wind threshed a large portion of them in such a way that the ground became white with grain.

Here in the field I met the chairman of the Berreznegovatskoye RAPO [Rayon Agro-Industrial Association], V. Rozdorozhnyy. I asked him what his task was during harvesting. "To render practical aid," was the answer. It is he who should have been first to avoid losses, who should have sent several combines, which were idle due to a shortage of small components--blade pins, into the fields more quickly. Incidentally, in many enterprises of the oblast combines remain idle because there is a shortage of pins, spare segments and teeth for the cutting apparatus.

In the oblast I heard from many people that it was impossible to harvest peas without losses. The senior agronomist of Bil'shovitskiy Nastup Sovkhoz, Kherson Oblast, and Hero of Socialist Labor N. M. Kotlyara, is of a different opinion.

"Peas can and must be harvested without losses," he says. "It should be cut into windrows only in quantities that can be collected and threshed in a day or two. We cannot leave the mass in the open for a long time."

I saw the sovkhoz field where peas were harvested and the fields on which combines were still working. There is no grain to be seen on the ground almost anywhere. On each of 525 hectares under difficult conditions 20.4 quintals of grain per hectare were obtained, and in the fourth section--27 quintals per hectare. In this enterprise not only equipment but people as well are prepared for the harvesting of grains. In the fields there are deputy posts and people's controllers; without the signature of the quality commission on the machine operator's assignment sheet bookeeping does not accept it for determining wages. Supplementary wages are paid only if threshing is carried out with high quality.

Kherson and Nikolayev oblasts are not only neighbors but also competitors going way back. They are located in practically the same soil-climatic conditions. But Kherson workers prepared more seriously for the harvest and this is why their harvest-transport complexes are working day and night. The threshing pace is high. Peas were harvested in a compressed period of time and wheat from the new harvest is being delivered to the homeland's granaries without interruption. The picture is different in Nikolayev Oblast. A considerable number of days has passed since the first harvesting units moved into the fields, but in many enterprises the necessary harvesting pace was never achieved.

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MAJOR CROP PROCESSING AND WEATHER REPORTING

WHEAT HARVEST IN ODESSA OBLAST

Moscow SEL'SKAYA ZHIZN' in Russian 5 Aug 84 p 1

[Article: "Into the Homeland's Granaries"]

[Text] High-quality grain has been cultivated by the farmers of Izmail'skiy Rayon, who today completed harvesting operations. They are delivering only strong and valuable varieties of wheat grain to state granaries.

"It was not easy for Izmail'skiy farmers to produce this grain," says the senior agronomist of the oblast agricultural administration, V. Makitruk. "Last year's dry fall complicated the situation in winter fields. This is why most wheat was placed on bare fallow or after peas, perennial grasses and other predecessors capable of accumulating moisture and nutritive substances in the soil. The largest areas were allocated for strong varieties developed in Odessa--Eritrospermum-127, Odesskaya-51 and Obriy. Together with scientists-agrarians, grain farmers have worked out a system for obtaining high-quality grain. They relied on mineral top-dressing of each field, counting on a planned yield. Corrections were also made in the technology for preparing soil and in sowing methods. And the wheat fields repaid them generously.

The new variety, Obriy, was especially satisfactory. It yields almost 58 quintals of highest quality grain per hectare--gluten content in it exceeds 30 percent, which is significantly greater than standard. In order to preserve the high conditioning of cultivated grain each field has been put under the control of public quality commissions. People's controllers are working on threshing floors and in reception points. They are observing the processing and preservation of strong grain. When sent to elevators, all trucks with high-quality grain are accompanied by way-bills with a red stripe.

A high-quality harvest has been cultivated in other parts of the oblast as well. Over 70 percent of the grain going to elevators from here is from strong and valuable varieties of wheat.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

GRAIN HARVEST, PROCUREMENT PROBLEMS IN KIEV, ZHITOMIR OBLASTS

Moscow SEL'SKAYA ZHIZN' in Russian 5 Aug 84 p 1

[Article by S. Luzgan, Kiev and Zhitomir oblasts: "Special Approach to Grain"]

[Text] Rain has been falling for 2 months now in the central region of the Ukraine. It can be a quiet drizzle or a downpour with storms and hail. It interferes with all the calculations of farmers. It becomes necessary to adapt, maneuver and utilize all possibilities in order to win from bad weather the harvest that was cultivated with such difficulty.

Recently I had the opportunity to travel through the fields of Kiev and Zhitomir oblasts and to meet with machine operators and directors of enterprises and rayons. Everywhere I saw a real battle for grain, at the vanguard of which came the communists as usual.

In the Pereyaslav-Khmelnitskiy party gorkom of Kiev Oblast I was advised to visit Kommunar Kolkhoz, where harvesting operations are proceeding adequately. On the way to the enterprise we were caught in a downpour. For several hours we could not move. But we did find all machine operators at the field camp.

"Whoever comes to visit us inevitably 'brings' rain," said kolkhoz chairman G. Kachkalda in unhappy jest.

"Seriously, how is harvesting going?"

"We are adapting to conditions," answered the chairman. "Our machine operators do not leave the fields even in bad weather; they are always ready to move from the pickup of windrows to direct combining. Each day with specialists we decide what to do. We utilize any 'window,' any hour of good weather."

Similarly, each work minute is cherished in Progress Kolkhoz, Kolkhoz imeni Shevchenko, Pereyaslavskiy Sovkhoz and other enterprises. From this come the results--under difficult weather conditions the region's machine operators are conducting the harvesting of early grain crops better than others.

In neighboring Zhitomir Oblast there are signs everywhere of the same type of high labor intensiveness. If weather permits, equipment is in operation almost on a 24-hour basis. If it is raining, machine operators do not leave the fields but wait in order to start work without delays.

"Grains and legumes occupy over 2,000 hectares here," says the chairman of Kolkhoz imeni Shevchenko, Andrushevskiy Rayon, K. Sterlenko. "There are 10 combines in the enterprise. The load is not a small one--over 200 hectares per machine. Coming to the rescue is the high degree of skill of machine operators and their business-like attitude toward and perseverance in work. During any year we complete harvesting during the optimal time. Grains have been placed in windrows on 1,500 hectares. One-third have been threshed. In recent days the pace of threshing has increased."

In the enterprise harvesting is being carried out by a harvesting-transport detachment. Machine operators work according to shifts. In a single complex the cleaning of fields and the preparation of fields for the next harvest are in progress. Standing out in work are N. Porskalo, V. Kulik, M. Soroka, A. Zamirovskiy, A. Zhura and other machine operators.

Here is a characteristic example of the current harvest. In Peremoga Kolkhoz during the night there was a, as they say, "regular" rainstorm. It rained on two fields but circumvented the third. Equipment was quickly transferred there and before the next rainstorm 34 hectares of grains were threshed.

"The harder the harvest," said the first secretary of the Andrushevskiy Rayon party committee, V. Vovk, in sharing his concerns, "the greater the degree of organization that must be demonstrated by its participants. Here we deal adequately with harvesting and threshing. The situation involving the working up of grain. Grain comes to threshing floors with an increased moisture content--30 percent and more. It is necessary to send it through the grain dryer 2-3 times, but there are not enough grain dryers. By ourselves we cannot manage to bring grain up to the necessary condition. Fearing losses, we turned to corresponding oblast organizations with a request to allow us to sell grain with a moisture content of about 20 percent."

Similar concern was expressed to me by the directors of neighboring Popel'nyanskiy Rayon. The chairman of the RAPO [Rayon Agro-Industrial Association] soviet, M. Tal'ko, is convinced that if permission is not granted to sell grain with a higher moisture content a significant portion of it will undergo self-warming, lose quality or even perish completely. The capacities of the rayon's drying enterprise are inadequate for bringing all grain up to the needed condition in the best time.

Having heard these fears I immediately went to Zhitomir to find out what oblast organizations are doing to fully preserve grain. I met with the first deputy chairman of the oblast executive committee and council chairman of the oblast agro-industrial association, A. Malinovskiy.

"The oblast's enterprises," said Anton Stanislavovich, "have already harvested over half of early grain crops. Less than half of what was harvested has been threshed so far. We are worried about grain sales to the state. In past years by this time we were selling 30,000 tons of grain and more daily, but now we can't even make it to 10,000 tons. Very moist grain is coming from combine bunkers. The capacities of dryers available in kolkhozes and sovkhozes do not secure its processing. Under optimal conditions it is possible to bring

one-fourth or at best, one-third of the grain up to condition. We have added units for vitaminous meal preparation to this work, but they also do not save the situation. More and more moist grain is accumulating on threshing floors."

"Why don't procurers accept it and bring it up to condition themselves?"

"The possibilities of grain-reception enterprises in the oblast are also limited. Their drying enterprises are now operating at full capacity."

"Apparently, under such conditions the answer is to have procurers accept partially-worked up grain from enterprises. This grain should then be sent immediately to grain-reception enterprises in other oblasts where less grain is submitted and where the drying industry is more powerful."

"Common sense tells us that this is the answer. There have been cases in which grain was sent here and we sent out grain to other oblasts for working up. The oblast administration of grain products made a similar proposal to the republic's ministry of procurement. The administration of the latter has promised to make a decision on moving our grain in the near future."

After returning to Kiev I went to the republic's procurement minister, I. Shmatol'yan, to find out how the request of Zhitomir farmers is being handled.

"It isn't only Zhitomir farmers who are asking to move moist grain into southern regions," answered Ivan Ivanovich. "We have received letters and phone calls about the same thing from directors in Kiev, Cherkassy, Chernigov, Vinnitsa and Khmelnitskiy oblasts. But you understand that this is not an easy situation. Railroad workers cannot accept grain with a moisture content greater than 20 percent. In transit it becomes packed easily and deteriorates. And we ourselves cannot resolve the problem of moving grain without the permission of the USSR Ministry of Procurement. Sanctions are needed. I sent a telegram to the USSR Procurement Ministry and am waiting for an answer. By the way, Kiev farmers have made an agreement with the administration of the Southwestern Railroad and are sending 150,000 tons of grain with a high moisture content to the south. It has been planned to send 50,000 tons of such grain from Zhitomir Oblast to other oblasts."

What can be said after hearing these clarifications? The question arises: Why must we ask, beg and convince Ukrainian procurers to demonstrate a business-like attitude and to concern themselves, together with grain farmers, with saving the grain that was cultivated with such difficulty? As full and equal representatives of the APK [Agro-Industrial Complex] and interested partners they themselves must act as organizers of grain procurement and not as passionless observers.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

GRAIN HARVEST PROGRESS IN STAVROPOL KRAY

Moscow SOVETSKAYA ROSSIYA in Russian 10 Jul 84 p 1

[Article by K. Styazhkin, TASS correspondent, Stavropol Kray: "According to Rapid Technology"]

[Text] Having begun in the steppes of the eastern region of Stavropol Kray, the harvest is moving persistently westward. The first leaders have already been determined. Among them is the mechanized harvesting complex of V. Tertyshnikov of Kolkhoz imeni Ipatov. Now in addition to 16 basic combines two reserve combines have been included for the complex's use during the entire harvest; moreover, permanent drivers have not been assigned to the reserve combines. It would seem to be a paradox--during the intensive period of harvesting the units are without masters.

"The advantages of combine reserves are irrefutable and numerous," says the complex director. "What was it like before? If a combine stopped the driver also involuntarily remained idle. Now metal workers-adjusters attached to the detachment work on the combine while the combine operator moves immediately to a different machine."

Harvesting grains rapidly means eliminating the main channels through which grain is lost. The specialists of the Stavropol Scientific-Research Institute of Agriculture once conducted an experiment--the same wheat field, divided into sections, was threshed at different times using different methods. It turned out that a week after the full maturation of the ear threshing using direct combining decreases yield by 1 quintal per hectare. Five days later the underproduction doubles. This is how quickly the hot southern sun and steppe winds "thresh" grains still standing in the fields. With two-stage harvesting if the collection of swathes is even 5 days late underproduction of a quintal of grain per hectare results.

The complex detachment of V. Tertyshnikov pledged to cut wheat on its assigned area in less than 4 work days and to collect swathes within 10. This type of schedule avoids losses completely. V. Tertyshnikov and his comrades harvest each piece of land according to an individual technology adapted to that parcel--a large portion of spike crops is placed into windrows and short-stemmed grains are put in double windrows.

Following an extremely compressed schedule, Stavropol farmers are conducting their eighth harvest in a row. As practical experience shows, the technology employed by V. Tertyshnikov and other leading collectives increases shift productivity of combines, curtails harvesting time and consequently, decreases grain underproduction.

The emphasis placed on two-shift work utilized during all daylight hours also makes a great contribution. A number of combines have been equipped with supplementary lights; when the weather is dry threshing does not stop at dusk. Replacement drivers have been sent from industrial enterprises, organizations and institutions of cities and rayon centers. Every fourth combine is driven by a young driver, a recent graduate of a village vocational-technical school, a general machine operator's course in a kolkhoz or sovkhoz, or a teaching production brigade.

Harvesting a large area of land of 1,860,000 hectares is complicated and multi-faceted. Errors do occur, of course. By far not all complexes have reserve combines, for example. On some plots already now, at the start of harvesting operations, we can see mistakes or grain spilled on the ground. In order to avoid waste links for the ideological initiation of labor competition have been created everywhere.

The field workers of Stepanovskiy Rayon have been the initiators of kray competition for the overfulfillment of plan goals. Of the 61,000 tons of grain to be sent to elevators, 50,000 tons consist of wheat of strong and valuable varieties. Here we have another advantage of the rapid harvesting pace--it allows farmers to harvest the spike while it contains the largest amount of gluten. The kray as a whole has accepted increased socialist obligations during this harvest--to sell the state no fewer than 1,960,000 tons of grain in its course.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

HARVEST PROGRESS IN KAZAKHSTAN

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 17 Aug 84 p 1

[Article: "Beginning Harvesting Operations"]

[Text] A hot summer accelerated the movement of the harvest front to the northern boundaries of the republic. Virgin-lands enterprises have begun the selective harvesting of crops. Machine operators must thresh grain on over 15.5 million hectares.

During the period of blooming and of grain formation there was no rain on large areas of land. But the consequences of this were mitigated by the persistence and purposefulness of machine operators who utilized the soil-conservation system of farming. The fields turned out to be uneven--dense and tall wheat and barley alternate with low-stemmed and sparse plots.

The agronomical services of sovkhozes and kolkhozes ahead of time determine the technology of work for each section of land, and RAPO [Rayon Agro-Industrial Association] soviets implement the maneuvering of equipment on an inter-enterprise level. Combines have been adjusted to cut low and equipped with attachments that avoid losses.

There has been a noticeable decrease in the forced idleness of combines while waiting for transport vehicles. The combine-trailer and portion methods of unloading grain are being used more extensively than last year. In Tselinograd Oblast, Kokchetav Oblast and in the leading enterprises of other oblasts powerful Kirovets tractors with large-capacity trailers are used in full measure.

The general attitude is to complete harvesting in the best agrotechnical time and without losses, and to pour as much grain as possible into the homeland's granaries.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

HARVEST PROGRESS, PROBLEMS IN KAZAKHSTAN

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 18 Aug 84 p 1

[Editorial article: "Harvesting All That Has Been Cultivated"]

[Text] Today the republic's grain farmers are undergoing a difficult test. The time for mass harvesting of crops has arrived. They were cultivated this year under extremely difficult conditions. Thus the value of the grain is even higher.

At the recent 14th Plenum of the Central Committee of the Kazakh CP it was noted that in order to produce a weighty round loaf it is necessary to mobilize all existing possibilities and it is essential to do everything possible to procure the maximal quantity of grain. No one is released from his quota. The plan is the law, and this law must be followed strictly by everyone without exception.

Right now it is very important to harvest crops on time and without losses. It is essential to preserve all that has been raised. Party, soviet and economic organs, soviets of agro-industrial associations and directors and specialists of enterprises must take all measures to preserve each quintal of grain, potatoes, vegetables and technical and industrial crops. "In struggling for weighty Kazakhstan grain," said Comrade D. A. Kunayev, member of the Politburo of the CPSU Central Committee and first secretary of the Central Committee of the Kazakh CP, at the 14th Plenum of the Central Committee of the Kazakh CP, "we are obliged first and foremost to forget about complacency, to work with maximal intensity and intelligence everywhere and to supply the homeland with as much food grain as possible, especially strong and hard wheat varieties as well as buckwheat and millet."

At the present time the virgin lands enterprises of Kazakhstan, the main producers of commodity grain, are beginning harvesting operations. Due to the drought a difficult situation developed here, but even under these conditions competition was begun for the overfulfillment of plan quotas for grain production and procurement. A good example are the grain farmers of the Voskhod Sovkhoz of Timiryazevskiy Rayon, North Kazakhstan Oblast, victors in all-union socialist competition last year. They have achieved stability in grain production and achieve large yields from year to year. This year, on

the basis of an increased quality of farming, the workers of enterprises cultivated an abundant grain harvest and are struggling to overfulfill sales quotas for grain.

In Kokchetav Oblast increased obligations were accepted by the brigade of Hero of Socialist Labor T. Abel'peisov of the Lavrovskiy Sovkhoz, which decided to harvest no fewer than 16 quintals of grain from each of over 2,000 hectares of crops.

In Tselinograd Oblast competition among machine operators is headed by Hero of Socialist Labor M. Mirshavko from Baumanskiy Sovkhoz of Krasnoznamenskiy Rayon. He pledged to thresh 1,000 tons of grain and to work no fewer than 5,000 standard hectares per year with his K-700 tractor.

We can cite many names of leaders in competition, who by their example inspire people toward labor heroism. It is necessary under difficult conditions such as during the current harvesting period. This year almost everywhere the grains are short and difficult to harvest; for this great skill on the part of machine operators, thought-out agronomic tactics and precise work organization are required.

In Moskovskiy Rayon of North Kazakhstan Oblast the enterprises are following a plan for harvesting operations that was developed by the agronomic service of Zagradovskiy Sovkhoz. After considering the year's conditions it was decided here to utilize direct combining in conjunction with two-stage harvesting. The first method eliminates grain losses. The second will be utilized on wheat fields where the crop is earmarked for seed. It is noteworthy that the sovkhoz does not have a quota for the delivery of seed grain, but will sell it in order to increase the profitability of farming. It is no accident that even during these dry years the enterprise has acquired almost 1.5 million rubles in profits.

This year the maturation of grains was late in north Kazakhstan; their mass harvesting is beginning almost 2 weeks later than usual. This means that it is necessary to curtail the harvesting period, which is possible only with the highly productive use of harvesting technology and means of transportation. This is the main task.

As usual, virgin lands enterprises have been provided considerable aid in terms of equipment, agricultural transport vehicles and mechanized cadres. It is the duty of party organizations and directors and specialists of enterprises and RAPO [Rayon Agro-Industrial Association] soviets to precisely organize work in the fields and on grain routes. With the existing combine fleet the republic can harvest grains from an area of no fewer than 1 million hectares daily. But to do this it is essential to include all existing equipment in work and to eliminate all idleness of this equipment. However, it has not yet been prepared everywhere. Many combines are still being repaired in Turgay, Karaganda and other oblasts.

This year an especially urgent problem is that of the effective use of transport vehicles. There has been a mobilization of 170,000 trucks and 100,000 tractor trailers for shipping grain. Now the goal is to use them effectively. KAZAKH-STANSKAYA PRAVDA has discussed leading methods of organizing grain transport

from fields to threshing floors and from enterprises to grain-reception enterprises. This year we must more widely introduce the combined-trailer and portion methods for transporting grain from combines. They enable us to sharply increase the productivity of harvesting units, decrease the need for transport vehicles and decrease the cost of shipments. The experience of the drivers' brigade of Volodarskiy Automobile Combine of Kokchetav Oblast, headed by a recipient of the Kazakh SSR State Prize, Yesil'bay Tyulemisov, can serve as an example of precise organization in the operation of transport vehicles. Last year in Shalkarskiy Sovkhoz with 10 machines and two reverse trailers each serviced three combine brigades. Each truck transported up to 100-120 tons of grain from the fields daily. This year the brigade, with the same composition, will service all five sovkhoz brigades, each of which has 17-20 combines.

Participating in the shipment of grain from enterprises to procurement enterprises will be 20,000 tractor-trailer rigs, including 128 with a capacity of 80-100 tons. For their effective use precise coordination is needed in the work of both the transport vehicle and grain-reception enterprises. Everywhere we need to organize the delivery and reception of grain according to daily and hourly schedules. Experience in such work organization does exist in the republic.

The present harvest was cultivated under extremely difficult conditions everywhere in Kazakhstan. This is why a subject of special concern for party organizations, soviets of people's deputies, directors and specialists of enterprises, machine operators, truck drivers and procurers must be that of preserving it. All that has been cultivated must be harvested. We are speaking about the entire biological harvest--grain, straw, chaff. Deputy posts and people's controllers must strictly control the quality of harvesting operations and stop damage in the fields. The agronomic and engineering services are called upon to check the sealing not only of combines but of straw collectors of combines as well because this year straw must become a large reserve in the feed balance.

The curtailment of losses will be facilitated by precise work of procurers. It is essential to eliminate such channels of grain loss as the incorrect evaluation of its quality, shortcomings in the organization of storage and untimely processing.

Harvesting has always been a national affair. This year industrial, building and transportation enterprises and educational institutions have sent over 40,000 machine operators to help the republic's kolkhozes and sovkhozes. Special concern must be demonstrated for them. The editors of KAZAKHSTANSKAYA PRAVDA received a letter of thanks to the party committee and the directors of Pyatigorskiy Sovkhoz, Derzhavinskiy Rayon, Turgay Oblast, for the well-organized living conditions provided for people who were recruited for the harvest. Here in brigades dormitories, bath houses and cafeterias were well organized. But there are signals about the fact that in the enterprises of other oblast rayons serious shortcomings are being tolerated as far as the services being rendered to people.

The letters are about a different attitude of directors of enterprises toward those who decide the fate of the harvest.

On the republic's fields there is a difficult struggle for grain. Party organizations, soviet and economic organs and directors of kolkhozes and sovkhozes must do everything for which they are responsible to quickly harvest crops without losses and to procure as much as possible from the fields.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

HARVEST PROGRESS, PROBLEMS IN KAZAKHSTAN REVIEWED

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 15 Aug 84 pp 1-3

[Article by K. Kim, G. Maslov and A. Raysh, special correspondents for KAZAKHSTANSKAYA PRAVDA, North Kazakhstan-Kokchetav oblasts: "By Bread Alone/ The Virgin Lands Before Harvesting"]

[Text] Over 15 million hectares of Kazakh virgin lands are sown in grain crops each year. Soon the intensive period of harvesting operations will arrive in the main fields of the republic. Grain farmers have done everything that depended on them to raise crops to cultivate a harvest under this year's exceedingly difficult conditions. Now our main goal is to quickly harvest the crops without losses and to ship them to the state's granaries on schedule.

Despite the fact that it was night it was very humid. In the city hotel all of the windows were wide open. And now, after 1.5 months of hopeless waiting for rain there was almost no one who believed that it would finally come. But the rain did come. First it was a warm drizzle, but after a minute it turned into a storm with lightning and thunder. It rained until almost dawn.

"During one night there was about 40 millimeters of precipitation--4-5 times more than during all of July," said the first secretary of the North Kazakhstan Oblast party committee, Vladimir Timofeyevich Stepanov, to us. "If we'd only had such rain a week earlier." After saying this he started looking for a piece of paper on his desk. When he did not find it, he turned over the compendium on the course of field work and on the back of it in pencil drew a sprawling plant. He explained, "This is how the barley looked at first. The prospects for the harvest were excellent in June. But then the heat of over 40 degrees with an atmospheric humidity of no more than 16-17 percent set in. In the course of a few days all auxiliary stems dried up and only the main one remained. We don't know yet whether they will begin to grow again and whether they will have time to form ears. Things are not yet clear with wheat--we hope there will be no early frost. People have done everything possible to cultivate a good harvest. They did even more than it would seem they had the power to do."

As in other regions of North Kazakhstan, in the Ishim area this is the fourth year of drought. In the past under such circumstances enterprises would not have even counted on a return on seed, but now grain farmers are talking about 10-12 quintals of grain per hectare as an extremely low harvest.

Since spring the situation that has been developing has not been to the advantage of farmers. We were reminded once again about the saying that a spring day feeds the entire year. Due to the slow warming of the soil and the drawn-out bad weather the sowing of wheat had to begin 4-5 days later than usual for the zone everywhere in the oblast. If it were not for the high degree of organization and the selflessness of machine operators it would not have been possible to complete work so quickly--in 5-6 work days. The selected tactics confirmed the correctness of agronomist's thought. Under this year's conditions late sowing has proven itself well. If the decision had not been made there would not have been the grain there is maturing in the fields now.

"Of course, there was a risk involved in curtailing the sowing schedule," says the senior agronomist of Zagradovskiy Sovkhoz, Aleksandr Khizhnyak. "But its degree was much smaller than in many other enterprises. In Moskovskiy Rayon our sovkhoz is in second place in terms of farming quality. This says a lot. Let us take, for example, just the fact that the volume of spring field work is much smaller here than elsewhere. We have moved to a minimal cultivation of the soil. Our fields are clean and there is no need to disturb the soil an extra time. This is why sowing was completed in the best possible time and another 1,000 hectares were seeded in Korneyevskiy Sovkhoz."

Since the beginning of the five-year plan the Zagradovskiy has underdelivered 3,200 quintals of grain. With its current production level this is not a great debt. This year the enterprise's grain farmers have firmly decided not only to eliminate the debt but also to begin fulfilling the quota for the last year of the five-year plan.

"We hope to produce the plan amount," says A. Khizhnyak. "We must harvest no fewer than 15 quintals of grain from each of 15,200 hectares. This is almost double the amount produced in 1982 and 1983."

Let's remember that this year is no more favorable than the two preceding years. The question arises: Why, then, is such a growth in productivity of fields expected? It was answered earlier by the first secretary of the North Kazakhstan Oblast party committee, V. T. Stepanov. During these dry years grain was produced by enterprises in which the quality of farming was higher and in which the zonal system had been assimilated within the entire complex.

In recent years here, as everywhere in the virgin lands, special attention has been given to the introduction of scientifically-based grain-fallow crop rotations with a short rotation. In Zagradovskiy Sovkhoz during the Eighth Five-Year Plan the area in clean fallow comprised about 6 percent, during the ninth--already 10.2 percent and during the 10th--12.2 percent of total area. The yield of wheat from fallow fields during dry years is 3.5-4 quintals higher than on the average for the enterprise.

"We would like to have more reconditioning plowland," says A. Khizhnyak, "but as of yet the possibility does not exist. This is why we work on fallow fields with such effort. Windbreak strips are planted on them and they are cultivated 4-5 times. Each year up to 45,000-50,000 tons of organic fertilizer are brought into the fields; the full dose of complex mineral fertilizers is applied. Moreover, when sowing the third crop after fallow mineral fertilizer is applied into the rows."

The senior agronomist in the Zagradovskiy is still young, having graduated from the Kurgan Agricultural Institute and replaced the current sovkhoz director, Ivan Karlovich Sholya, as agronomist just 10 years ago. Under his tutelage Khizhnyak developed as an agronomist, although by the time of graduation from the institute he did have a solid base of knowledge about the agrotechnology of virgin lands farming. For 3 years student Aleksandr Khizhnyak underwent practical training in Shadrinskiy Rayon of Kurgan Oblast and many times he visited the fields of T. S. Mal'tsev and had long discussions with him. He compared the system of the people's academician with the scientific bases for the soil-conservation technology of A. I. Barayev, and then in independent work he received the greatest opportunity for putting his knowledge into practice.

"The agronomist is creative, seeking," said Ivan Karlovich Shol' in characterizing his replacement.

Such creative people are raising their difficult bread in Tarangul'skiy Sovkhoz, which surpasses Zagradovskiy Sovkhoz in terms of farming quality, in the Sovkhoz imeni 25 S"yezd KPSS and in Bulakskiy Sovkhoz. These people live for the sake of bread alone, as was said by the first secretary of the Moskovskiy Rayon party committee, Yerkin Nurmukhambetovich Meyrmanov. Thanks to them, during this difficult year the rayon's enterprises have mitigated the consequences of drought and the rayon must fulfill its quotas for grain procurement. Here it is planned to produce at least a 100 pood harvest.

This type of yield has been promised by the well-known brigade leader of Lavrovskiy Sovkhoz of Volodarskiy Rayon, Kokchetav Oblast, Hero of Socialist Labor Turlybek Abel'peisov. For him the grain is not the best, but it is good for current conditions.

Turlybek Abel'peisov has 2,600 hectares of grain and feed crops. The brigade has increased the area in fallow from 5 to 16 percent in recent years. This could not but have an effect on the productivity of fields. Grain yield increased from 15 quintals during the Eighth Five-Year Plan to 19 quintals per hectare in the 10th. In last year's unfavorable weather conditions 14.7 quintals per hectare were produced. From fallow fields up to 20 quintals of superb grain were produced.

During this period we saw a great deal of grain. In Tselinograd Oblast the grain has already yellowed and matured. In Kokchetav Oblast it is just beginning to turn yellow and in North Kazakhstan Oblast it is still green, but satisfying in its cleanliness as far as the eye can see. The harvest is not yet ready, but the weather of the last 7-10 days will complete it. Never-

theless, its size will depend totally on how senior agronomist Aleksandr Khizhnyak or brigade leader Turlybek Abel'peisov organize harvesting operations, on how Yesil'bay Tulemisov, brigade leader of truck drivers, services combines and on how RAPO oviets and procurers organize the delivery of grain to state granaries.

In Zagradovskiy Sovkhoz : is planned to complete harvesting and threshing of grains in no more than 20 days. All 65 combines will be included in work. Combines have been equipped for two-shift work in two brigades, which have made a transition this year to collective contracts. Here the portion method is used to move grain from the fields to the threshing floor. In others the combined trailer method will be used; for the first time K-700 tractors will be tried in the transport of grain.

In recent years the brigade of Turlybek Abel'peisov has been transporting grain without the use of transport vehicles. For its 11 combines it has prepared two bunker-accumulators and 10 trailers. The grain will be moved by K-700 and Belarus' tractors.

In Shalkarskiy Sovkhoz of Kokchetav Oblast the drivers' brigade of the Volodarskoye Automobile Enterprise, headed by recipient of the Kazakh SSR State Prize Yesil'bay Tyemisov, will be involved in transporting grain. Last year with 10 machines it transported all of the grain threshed by three brigades of combine operators. This year it has decided to service all five sovkhoz brigades, each with 17-20 combines, in the fields using the same number of machines as previously. According to calculations, one truck must transport no fewer than 100 tons of grain daily.

It is no accident that we are paying more attention to the organization of grain shipments. In the virgin lands there is still a shortage of transport vehicles during the peak periods of field work. With the existing harvesting technology it is one of the most important links in the field conveyor and the one on which the productivity of combines depends. In connection with this the question again arises: Would it be possible to curtail the distance a truck must go? For example, some fields in Zagradovskiy Sovkhoz are located 6-7 kilometers from the Borneyevskoye Grain Reception Enterprise, but the sovkhoz passes it by to take grain to the central threshing floor 27 kilometers away and then brings it back to the procurers. It appears that it would be possible to organize the delivery of grain directly from the combine to the grain-reception enterprise.

In the virgin lands harvesting time is approaching. It is not an easy time. This year's will be more complicated because of the late maturation of grains, their short height and their mixed character, as well as for many other reasons. But grain must be harvested without losses. Today there can be no other concern in the village but this.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BAD WEATHER PROBLEM IN LVOV OBLAST

Moscow IZVESTIYA in Russian 7 Jul 84 p 3

[Article by V. Vukovich, Lvov: "How the Cyclone Turned Out"]

[Text] There was a lengthy prelude, if we can say that, to this cyclone, which developed over Transcarpathia. Beginning during the first 10 days of May Lvov Oblast found itself in a rain belt. Each month there was more precipitation than normal. Then there was a meeting of warm and cold air masses. This became the reason for heavy downpours. During the night of 5 July mountain streams turned into torrents. As a result of this the water began to rise 1, 2 and 3 meters in large rivers.

Weather forecasters warned us about the cyclone ahead of time. Preventative measures were taken in mountainous regions. But bad weather is bad weather. One can expect anything from it. This is why early in the morning in Skolevskiy Rayon workers began to save several large bridge crossings. If they were not saved a good portion of settlements would be cut off. Quarries resounded with explosions. Heavy blocks of rock were loaded onto heavy trucks, taken to dangerous places and thrown off the shore. Bridges remained whole.

As usual, heavy rainfall over the Carpathians causes lowland streams and rivers to leave their beds. In Nikolayevskiy Rayon coastal dams were broken in a number of places. Several thousand hectares of kolkhoz crops have been flooded. Two and a half thousand head of cattle have been left without pastures. In Zhidachovskiy Rayon the situation is even worse--the Dnestr left its banks and flooded a good portion of crops and natural pastures. It became necessary to transfer 6,000 cows and calves to stall upkeep. Several villages have been cut off by water. In other rayons small bridges have been washed away. Silt has been put down in a number of wells of city water supply systems, putting them out of operation.

The cyclone provided an unexpected "surprise" for ore extractors of the Sera Production Association. The downpour flooded one of the electrical substations. A second also turned out to be damaged. One after another the pumps at the bottom of the quarry, the depth of which is 80 meters, stopped working. Rain

currents began to accumulate there. Soon there was another problem--pumps that pumped water to the shops of the technological complex broke down. The smelting of sulfur was halted.

Immediate action had to be taken. On 5 July by the end of the day the water supply was returned to the complex. It has reserves of ore that can be processed. During the night shift almost the plan norm of production was achieved. Emergency brigades continue to work in the quarry. During the night under difficult conditions they installed three powerful pumps and put them into operation. The pumping out of thousands of cubic meters of water that had accumulated in the quarry was begun.

The cyclone lasted a relatively short time. Gradually it moved east. Measures are being taken to eliminate the consequences of the bad weather. Weather forecasters promise improvements in the weather and short-term rains.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

LARGEST POTATO FIELD--Bryansk--The formation of mechanized teams for the growing of potatoes has been completed on farms in Bryansk Oblast. Approximately 900 of them were created.. This year, 116,000 hectares have been set aside at the kolkhozes and sovkhozes for the "secondary grain." This is the largest potato field in the republic. On almost this entire area the crop will be cultivated by teams which converted over to use of the collective contract. /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 21 Mar 84 p 1/ 7026

HIGH POTATO PLANTING RATES--Bryansk--The farms in Bryansk Oblast have commenced their mass planting of potatoes. In Novozybkovskiy Rayon, for example, they have already been planted on more than 1,000 hectares -- one fourth of the potatoe plantations. The farmers in other rayons are also carrying out this work at a high tempo. 116,000 hectares have been allocated for the "secondary grain." This is the largest field in the republic. Taking into account the peculiarities of this year's spring period and the deficit of moisture in the soil, the farmers are striving to plant their tubers as rapidly as possible. /Text/ /Moscow TRUD in Russian 25 Apr 84 p 1/ 7026

TENDING OF POTATOE PLANTATIONS--Bryansk--The farmers in Bryansk Oblast have organized the tending of their potato plantations in an efficient manner. The unstable weather conditions have confronted them with additional concerns. But the machine operators are coping with them successfully and devoting a maximum of effort towards ensuring that a fine harvest is obtained. Deep loosening of the inter-row spacings is being carried out, additional dosages of fertilizer are being applied and the sowings are being treated with special preparations in an effort to combat diseases and pests. This year the Bryansk farmers have vowed to obtain 150 quintals of tubers from each hectare. /Text/ /Moscow TRUD in Russian 25 Apr 84 p 1/ 7026

FINE USE OF EQUIPMENT--Bryansk, 1 May--The planting of potatoes is being carried out at a maximum tempo throughout the oblast. The farmers in Novozybkovskiy Rayon are the leaders in the competition. They were the first here to complete the planting of tubers at the Volna Revolyutsii Experimental Farm. The crews of L.F. Novikova in Starodubskiy Rayon, M.N. Logunov in Pogarskiy Rayon and N.S. Silin in Zhukovskiy Rayon are setting a fine example in the highly productive use of equipment and the skilful carrying out of the agrotechnical requirements. /by V. Zhukov/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 2 May 84 p 1/ 7026

HIGH POTATO YIELD EXPECTED--Bryansk Oblast--"We have the largest potato field in Russia; it occupies almost 116,000 hectares" stated the 1st deputy chairman of the Bryansk Oblast Executive Committee V. Yeslikov, "And the crop is looking good." The potatoes are growing very well in those areas where a high culture of farming is being employed. For example, all of the farms in Novozybkovskiy Rayon have already cultivated their plantings three times and the kolkhozes and sovkhozes in Klimovskiy, Klintsovskiy and Mglinskiy rayons are also observing the labor rhythm and carrying out increased cultivations in the interest of eliminating the weeds and pests. If we look at the entire oblast, then the second cultivation of the plantations has commenced. True, some farms are slow in carrying out their work and have fallen behind with their cultivations. But the situation on the whole, especially with regard to the quality of the work being carried out, is better than last year and thus a high yield is expected.
/by I. Pyrkh/ /Excerpt/ /Moscow SOVETSKAYA ROSSIYA in Russian 6 Jun 84 p 1/
7026

POTATO PLANTING WORK COMPLETED--Bryansk, 26 May--The planting of tubers was completed today on Russia's largest potato field, in Bryansk Oblast. Here the potatoes are planted on almost 116,000 hectares of arable land. Mechanized subunits which have converted over to the collective contract method grow the "secondary grain" on 90 percent of this area. They have already accomplished a great deal in the interest of obtaining a fine crop. Taking into account the peculiarities of this current spring period, they turned the moisture over in the soil in a timely manner, they applied 50-60 tons of organic material and optimum dosages of mineral fertilizer to each hectare of arable land and they employed the ridge method for planting potatoes, using tubers which had germinated in advance. The tending of the crops is being carried out in all areas at the present time. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 27 May 84 p 1/ 7026

TENDING OF PRINCIPAL CROP--Bryansk, 2 Jun--The oblast's farmers are carefully tending their principal crop -- potatoes. This work is being carried out successfully by the mechanized teams of A. Kovalev at the Kommunar Kolkhoz, V. Kleshchevnikov at the Krasnyy Stroitel' Kolkhoz in Novozybkovskiy Rayon, Ye. Metelitsy at the Kolkhoz imeni Chapayev in Pogarskiy Rayon and by many others. The first cultivation of the potatoes is being completed in all areas and on fields where the seedlings have appeared -- the second cultivation has been carried out. /by A. Glazkov/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 3 Jun 84 p 1/ 7026

HARVEST BEGINS--Rovno, 1 [Aug]--Oblast enterprises have begun the mass harvesting and threshing of peas, barley and wheat. Moving into the fields are 425 harvesting-transport complexes. The characteristic of this harvest is the extensive introduction of brigade contracts and the watch method. Basically, kolkhozes and sovkhozes have chosen the two-stage method of grain harvesting. Each combine operator's assignment is determined by control threshing in the fields. [By N. Tereshko] [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 2 Aug 84 p 1] 8228

HARVESTING BEGINS--Nal'chik, 28 [Jun] (By telephone)--After abundant rains and cold weather summer days have finally arrived in the republic. Fields in barley, peas and wheat are quickly turning yellow. Machine operators of Kolkhoz imeni Petrovy and Kolkhoz imeni Lenin of Prokhladenskiy Rayon were first to bring out their combines to harvest barley. The workers of Prokhladenskiy Rayon will harvest over 10,000 hectares of barley in 5 work days. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 29 Jun 84 p 1] 8228

PROGRAMMING HARVESTS--Simferopol', 27 June (TASS)--Crimean farmers have begun mass harvesting of winter barley. Machine operators were festively sent off to the fields in the progressive Rossiya Kolkhoz of Krasnogvardeyskiy Rayon. Here grains are cultivated on irrigated lands with the use of a system of programmed harvests. Mowing, threshing and the shipment of grain and straw have been assigned to transport crews. Prior to going into the fields machine operators are provided with quality coupons. This will enable us to more fully and objectively evaluate the final results of their labor. Crimean machine operators intend to complete the harvesting of spike crops, occupying 600,000 hectares, in 10 work days. [Text] [Ashkhabad TURKMENSKAYA ISKRA in Russian 28 Jun 84 p 1] 8228

WHEAT HARVEST HALFWAY--Simferopol', 17 [Jul] (TASS)--Crimean machine operators have completed harvesting over half of the area in wheat. At the same time they are accelerating the pace of threshing. Enterprises are simultaneously sending wheat, primarily of strong and valuable varieties, to elevators. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 18 Jul 84 p 1] 8228

BARLEY HARVEST--Although in Krasnoperekopskiy Rayon of Crimea Oblast there has not been a drop of rain during the spring and summer, farmers in leading enterprises here have raised a good barley harvest. Not only the proximity of the reclamation system of the North Crimean Canal but the timely completion of agrotechnical measures played a role here. [Excerpt] [Moscow TRUD in Russian 12 Jul 84 p 1] 8228

HARVEST PEAK IN UKRAINE--Kiev, 28 [Jul] (TASS)--In the Ukraine the harvest has reached its peak. Today the republic's grain farmers concluded the harvesting of early grains and legumes on 6 million hectares or half the total acreage. The enterprises of Crimea, Zaporozhye, Kherson and Voroshilovgrad oblasts have moved combines from the last enclosures. The experience acquired by machine operators in the south regarding the highly productive use of technology and the achievement of a shock work pace under bad-weather conditions is now being utilized by thousands of crews in central and northwestern rayons. Here units have been concentrated in large harvesting-transport detachments and complexes. Brigade contracts have been introduced. In Kiev Oblast, where grains must be harvested from 560,000 hectares various types of attachments are used for harvesting and threshing, moist grain is dried on threshing floors, in large elevators and grain-reception enterprises. Harvest intensity is growing in the republic. After combines leave, straw is removed from fields and they are prepared for the next harvest. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 29 Jul 84 p 1] 8228

HEAVY RAINS TAKE TOLL--L'vov, 5 July--There has been rainy weather in Lvov Oblast for more than a week. In recent days downpours have begun. They are especially strong today. During the night the large rivers--Stryy, Opor and others beginning on the slopes of the Carpathians--rose 2-2.5 meters. In a number of places meadows and crops began to be flooded and water is moving toward villages and farm and livestock-raising structures. As reported to your reporter by the oblast staff on combatting bad weather, a difficult situation has developed in mountainous Skolevskiy and Turkovskiy rayons. In the former it was necessary to immediately evacuate children from a pioneer camp. Flour, baked bread and food are being brought to villages. In Turkovskiy Rayon in a number of places water has washed away small bridges and has covered the roads to some villages. Measures have been indicated for moving inhabitants to safe places if necessary and for supplying them with all that is necessary. In foothill Stryyskiy and Zhidachovskiy rayons measures are being taken to avoid the ruinous consequences of bad weather, especially in places through which the Stryy and Dnestr rivers flow. [By V. Vukovich] [Text] [Moscow IZVESTIYA in Russian 6 Jul 84 p 6] 8228

EXTRA TRUCKS FOR HARVEST--Moscow--A large column of trucks has been sent to help agricultural workers. Drivers from the capital will help to transport the harvest in Krasnodar and Stavropol krays. Not only trucks, but mobile repair shops and spare parts have been sent there. Machines have been equipped with special components in order to avoid grain losses. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 14 Jul 84 p 1] 8228

MILLION TON HARVEST--Stavropol (TASS)--The millionth ton of grain from the fields of Stavropol were poured into state granaries yesterday. The collective goal of the kray's kolkhozes and sovkhozes is to deliver 1,960,000 tons of grain to elevators by the end of the harvest. The enterprises of Levokumskiy Rayon were first in the kray to meet their annual goals for the sale of wheat and barley to the state. Urozhaynenskiy Sovkhoz, which was able to meet its five-year sales goals in four, set an example of a concerned attitude toward the grain field here. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 24 Jul 84 p 1] 8228

ELEVATORS READY FOR HARVEST--Ipatovo (Stavropol Kray) (TASS)--The highly productive technological conveyor, the installation and testing of which has been completed at the Ipatov elevator, largest in the Stavropol steppe, has been set to avoid idleness in the truck schedule during wheat and barley procurement. Ordzhonikidze--All elevators, calibrating plants and reception points in the North Ossetian ASSR have been readied for the harvest. New equipment, which will increase the work pace by a factor of 2, has been installed in elevators in Mozdokskiy, Ardonskiy and Kirovskiy rayons. Mechanized storehouses, the scales industry and drying complexes have been readied in other parts of the republic as well. During this season for the first time procurers, with the help of specialists from the republic's information-computer center, made up a schedule for the delivery of grain to elevators. During the intensive period of harvesting operations this will enable workers to receive grain from enterprises in an efficient and quality manner. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 19 Jun 84 p 1] 8228

GREEN PEAS HARVEST--Krasnodar, 8 [Jun]--Green peas now occupy almost 20,000 hectares in the kray. The area has been increased by one third as compared to before, which guarantees the fulfillment of the plan for the procurement and processing of a valuable vegetable product. This year a fairly good harvest has been raised almost everywhere. Now mass harvesting is in progress in the kolkhozes and sovkhozes of Krasnoarmeyskiy, Dinskiy, Krymskiy and some other rayons, where the yield of green peas equals 50-55 quintals per hectare. To make sure that this delicacy crop not stand too long it was sown at different times and the seed of several different varieties was used. The cut mass is given 56 points by the primary processing of vegetables, for which 343 pea threshers were installed and adjusted--a significantly greater number than last year. Their daily productivity is over 5,000 tons of raw materials. [By Yu. Semenenko] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 9 Jun 84 p 1] 8228

PEAS HARVEST BEGINS--Ordzhonikidze, 15 [Jun] (TASS)--Specialized enterprises in the North Osetian ASSR's agro-industrial association have begun harvesting green peas. This year the area in this crop has been expanded. The first 100 tons of green peas have been delivered to shops of canning enterprises. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 16 Jun 84 p 1] 8228

DAGESTAN HARVEST--Makhachkala--Tractor-trailer rigs carrying grain from the new harvest are moving along the roads of Dagestan. Winter barley and wheat are arriving at reception points. The largest yields--30 quintals per hectare and more--are being achieved by the farmers in the enterprises of Kizlyurtovskiy, Kizlyarskiy and Khasavyurtovskiy rayons. [Text] [Moscow TRUD in Russian 20 Jul 84 p 1] 8228

FLOW METHOD OF HARVESTING--Makhachkala--Winter grains have matured on Dagestan fields. Machine operators have begun harvesting barley. During this season all kray enterprises will make the transition for the first time to a flow technology for harvesting grains. Equipment has been unified into complex detachments and combine crews have been equipped for two-shift work. It has been decided to increase output per unit to 10 hectares per day as compared to the normal 8 hectares. [Text] [Moscow TRUD in Russian 20 Jun 84 p 1] 8228

CSO: 1824/612

POST HARVEST CROP PROCESSING

PREPARATIONS TO HARVEST, PROCESS 1984 SUGAR BEET CROP REVIEWED

Moscow SAKHARNAYA PROMYSHLENNOST' in Russian No 7, Jul 84 pp 2-5

[Lead article: "Preparing Sugar Plants and Beet-Reception Points Well For the New Season"]

[Text] The 26th CPSU Congress, in presenting a broad program for social development and for improving the well-being of the Soviet people, made the task of improving food supplies to the population a priority goal. This goal was embodied in the USSR Food Program, which is being implemented at the present time and which is the most important factor in the party's economic strategy at the contemporary stage. Of primary importance now is increasing the effectiveness of utilizing the potential that has been created in agriculture and the processing industries and a fuller return on resources that are directed into the development of the agro-industrial complex.

The country's beet farmers and workers of the sugar industry have done important work to raise the effectiveness of beet and sugar production. As a result of the consistent implementation of a course toward the intensification of agriculture, despite the unfavorable climatic conditions in the main beet-sowing regions, in recent years there has been an increase in the procurement of sugar beets (as compared to 1981 the procurement of sugar beets increased by 10.6 million tons in 1982 and by 21 million tons in 1983).

A considerable amount has been done also to strengthen the material-technical base of the sugar industry--the technical reequipping of many sugar plants has been completed, capacities to process beets have been increased, progressive methods for storing and processing beets have been introduced and the level of technically equipping beet-reception points, of mechanizing labor-intensive operations and of automating production processes has been raised.

The network of beet-reception points and sugar plants existing at the present time and their capacities enable workers to accept 85-90 million tons of beets in 40-45 days and to process them in the course of 115-120 days with high technical-economic indicators.

Nevertheless, the created production potential is not utilized in full measure due to serious shortcomings in the work of a number of enterprises of the sugar

industry. Last year in the branch as a whole the plan for the production of granulated sugar from beets was not fulfilled, the level of use of production capacities for processing beets fell, losses of beets and sugar during storage and shipment still remain high and the goals for economizing on raw materials, fuel-energy and other resources were not met.

As a result of the unsatisfactory preparations for the production season and of violations of the rules for operating and servicing equipment, some sugar plants worked at a low productivity, tolerated idleness of long duration and unjustifiably lengthened the processing of beets and decreased the output of production.

The premature, forced digging up of sugar beets in Voronezh, Tambov, Lipetsk, Orel, Kursk and other oblasts of the RSFSR had a negative effect on the work indicators of the sugar industry last season. This resulted in great difficulties in the transport and reception of beets as well as in preserving the procured raw material and in the effectiveness of its processing.

In a number of cases the directors of associations and sugar plants and the workers of raw material sections exhibited an unscrupulous attitude toward questions related to determining the quality of the beets being received. Thus, an investigation revealed that in many beet-reception points sugar beets were received with a violation of state standards; often unconditioned beets were accepted and paid for as conditions and thus an incentive was provided for the delivery of poor quality beets..

Therefore, it is no accident that during the 1983/84 season during the reception, storage and shipment of sugar beets losses were unjustifiably high, equalling 8.8 percent in the sugar plants of RSFSR Minpishcheprom [Ministry of the Food Industry], 8.3 percent in those of the Armenian SSR Minpishcheprom and 6.1 percent in those of the Lithuanian SSR Minpishcheprom. We cannot be reconciled to such great losses of raw materials; the ministries of the food industry of union republics must increase the responsibility of workers in sugar plants and in beet-reception points with regard to the preservation of procured raw materials.

In preparing for the new production season, ministries of the food industry of beet-sowing union republics, associations and enterprises of the sugar industry, together with rayon agro-industrial associations, must once again analyze in detail the shortcomings that existed in 1983 with regard to the organization of harvesting, transport, reception, storage and processing of raw materials with a view to avoiding them in the future.

The results of the work of enterprises in the sugar industry during the 1983/84 production season show that in places where beet-sowing enterprises and sugar plants were well prepared for the season and where they strictly carried out measures directed at improving beet quality and its storage, highly productive, well-paced work was achieved in plants and high end results were achieved. We can use as our example of this the collective of communist labor of the Krasnoselkovskiy Sugar Plant, Vinnitsa Oblast, which in 1983 achieved high results--the production of 50.1 quintals of sugar per hectare of beet fields--

on the basis of creative cooperation with beet farmers of the raw materials zone and with transportation and other organizations.

During the last production season successful work was accomplished by the collectives of the Leningradskiy, Uspenskiy, Buinskiy, Karlamanskiy, Gonorovskiy, Parkhomovskiy, Zbarazhskiy, Gorodeyskiy, Brodetskiy, Il'inetskiy and many other sugar plants.

The work experience of the aforementioned and of other sugar plants attests to the fact that a dependable basis for the quality preparation of enterprises in the sugar industry with regard to the reception, storage and processing of sugar beets from this year's harvest with high indicators is the continued development and strengthening of creative cooperation among beet farmers and the workers of sugar plants and transportation and other organizations for the purpose of achieving the maximal output of sugar from every hectare of beet fields.

We know that the results of the production season are affected not only by the quantity but also by the industrial quality of the sugar beets arriving for processing. The achievement of this goal depends on raising the quality of the sowing material and on adhering to all agrotechnical methods for cultivating sugar beets, to schedules for harvesting and transport, and to the technology for their reception, storage and processing; in other words, in the final analysis the achievement of this goal depends on coordinated work in all sections of the beet and sugar conveyor. In turn, the delivery to beet-reception points of beets that do not meet GOST standards with regard to quality decreases the effectiveness of technical measures being implemented to preserve and process them and results in additional unjustified production costs and in a drop in sugar output.

This year the further equipping of beet-reception points is to continue in order to improve the organization of the reception and more complete preservation of the industrial qualities of beets during storage. In particular, it is planned to build 2,182,000 square meters of mechanized storehouses and platforms with firm covers and active ventilation, to install over 200 truck scales for large-capacity trucks and 52 mechanized lines for the selection and analysis of beet samples for impurities, and to acquire about 700 tractor loaders, 519 beet-pacing machines and over 12 million square meters of covering materials.

Nevertheless, significant lags have been tolerated in the preparation of beet-reception points, especially in the building of platforms with active ventilation. It is essential that in the time remaining before the arrival of beets from the new harvest in plants the workers of enterprises and associations of the sugar industry eliminate existing shortcomings regarding the preparation of beet-reception points with the goal of achieving the fulfillment of plans to store beets with active ventilation and to treat them with biologically-active preparations.

During the past production season over 300,000 tons of beets were stored using coverings made of carbamide-formaldehyde foam plastic. Positive results were achieved with the storage of beets utilizing this method; the first assembly-line machines for covering root crop storage pits have been manufactured.

It is the task of specialists of raw-materials sections to carry out extensive production testing of foam plastic under various climatic conditions in the country with the goal of continuing to use the new covers.

A serious shortcoming in the work of sugar plants during the season for processing beets from the 1983 harvest was the incomplete utilization of production capacities. In industry as a whole existing capacities for beet processing were utilized by only 86 percent, including by 81.3 percent in the plants of RSFSR Minpishcheprom and by 72 percent in those of the Kirghiz SSR Minpishcheprom. To this we should add shop idleness, which comprised 1,085 plant-days and non-shop idleness--545 plant-days.

The reasons for these shortcomings are well-known to workers in the sugar industry--poor preparations of a number of enterprises for the season and the unsatisfactory organization and carrying out of production. Workers are also familiar with the ways to eliminate the aforementioned shortcomings--first and foremost by means of the quality repair of all equipment and structures, by means of the timely discovery and elimination of problem areas in production, by means of the precise organization of planned-preventative repairs and of good training of service personnel, by means of the creation of the necessary reserves of fuel and basic and auxiliary materials and by means of the priority shipment and processing of beets from railroad and remote points. The meeting of these goals is feasible for the collectives of every enterprise.

There are great reserves for raising the effectiveness of the branch in the better utilization of production capacities and in decreasing idleness in plants. Suffice it to say that an increase in the utilization of capacities by only 1 percent is equivalent to the building of three new sugar plants with a capacity of processing 3,000 tons of beets per day each. This is why it is important that the efforts of directors of all engineering-technical personnel in sugar plants and associations be directed at preventing lags during the new production season as a result of poor repairs and servicing of equipment; there should be a significant improvement in the use of production capacities.

The capacities of newly operational sugar plants are being assimilated extremely slowly, which can be explained first and foremost by their acceptance with uncompleted building of production objects and the necessary housing fund. This had a negative effect on supplying plants with trained cadres. The directors of ministries of the food industry, associations and sugar plants must take the necessary measures to quickly complete the building of all production and housing-personal objects within these plants as well as to have them assimilate planned capacities.

In a number of associations and some enterprises the necessary attention is not given to the introduction of achievements of scientific-technical progress,

the established goals related to the assimilation of new technology are not fulfilled and the effectiveness of individual elaborations is still low.

The ministries of the food industry of beet-planting union republics and the directors of associations and sugar plants must strengthen controls over achieving the fulfillment this year of goals related to the introduction of new technology in branch enterprises.

Possibilities for economizing on raw materials, fuel-energy, material and labor resources that exist in branch enterprises are not being fully utilized. In industry losses of raw materials are still great and many enterprises expend significant quantities of fuel, electrical energy and limestone, which can be explained basically by the absence locally of the necessary accounts and controls, by a violation of technological discipline and by a lack of fulfillment of instructional regulations and normative materials. Instead of elaborating and implementing supplementary measures to achieve normal consumption, some directors try to explain that this is impossible due to local conditions.

It is the task of all workers in the sugar industry, regardless of the job held, to carry out persistent work on the unconditional fulfillment of established goals regarding economizing on all types of resources and to exhibit a careful and economizing attitude in the use of raw materials, fuel, electrical energy and materiel.

The unsatisfactory performance of many sugar plants during the last production season was also the result of the fact that a number of ministries of the food industry in the beet-planting union republics weakened their aid to sugar plants as regards the organization of the procurement, reception and storage of raw materials, tolerated shortcomings in work and did not demonstrate the necessary demandingness toward the directors of poorly-operating enterprises. It is important to improve all forms of preparations and the education of cadres and to implement regular controls and verifications of the carrying out of assigned tasks. Questions related to the training of cadres must be under the daily control of directors of ministries, associations and sugar plants.

A task of priority importance is to facilitate in every way possible the continued improvement in socialist competition and its efficacy; the extensive introduction of the brigade form of labor organization and stimulation in branch enterprises and the dissemination of the experience of innovators and leading collectives.

This year the enterprises and associations of the sugar industry in the Ukrainian SSR Minpishcheprom are preparing for the production season under conditions of an economic experiment. The careful study of technical and normative documentation on carrying out the experiment, the introduction of additional proposals to improve the proposal and recommendations and the extensive evaluation of the experiment's results should facilitate its successful implementation.

This year the workers of the sugar industry have the great and responsible task of producing 13,325,000 tons of granulated sugar, including 9,140,000 tons from beets. During the second half year they must process 78,650,000 tons of beets and produce 8,932,000 tons of sugar from them. This production volume quota exceeds that for sugar production in the second part of 1983 by 1,080,000 tons. Its fulfillment signifies the necessity of utilizing all existing resources, of organizing the reception and storage of beets well and of securing the well-paced highly productive operation of sugar plants with the maximum possible output of sugar beginning during the first days of the production season.

At the present time sugar plants have entered a more responsible period. In order to complete the preparation of sugar plants and beet-reception points in a timely manner there is a need for precise work organization and daily shock labor on the part of the collectives of all enterprises and associations within the sugar industry. We are speaking first and foremost about the further strengthening of labor discipline, about increasing organization and responsibility for the assigned task and about bringing order in each work place.

At the April 1984 Plenum of the CPSU Central Committee, Comrade K. U. Chernenko said, "...It would be proper if each one of us forbade ourselves some one slackness. Concern, or even alarm, regarding the state plan should not leave us for a minute. Let us agree--this year demandingness must be greater than ever before with regard to any incomplete work or any work stoppage tolerated. Our party position can be no other."

Reception committees of sugar plants following repairs must more carefully, and in a state manner, examine the preparation of plants and beet-receiving points for the new production season. They must require that the workers of enterprises eliminate discovered shortcomings in the repair of equipment, mechanisms and structures.

In following the decisions of the 26th party congress and the December 1983 Plenum of the CPSU Central Committee, workers, engineering-technical workers and employees of the sugar industry have begun socialist competition for the fulfillment and overfulfillment of 1984 goals, for increasing labor productivity by 1 percent over the established plan and for decreasing the cost of production by 0.5 percent.

The ministries of the food industry of beet-planting union republics and associations of the sugar industry must become more deeply involved in the operations of each enterprise, more strictly evaluate their results, focus their attention on bringing up lagging sections and, without decreasing work intensity, do everything possible for the unconditional fulfillment of the 1984 plan and of socialist obligations.

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POST HARVEST CROP PROCESSING

ROLE OF TRANSPORT VEHICLES IN HARVEST DESCRIBED

Moscow MOSKOVSKAYA PRAVDA in Russian 26 Jun 84 p 1

[Article by R. Ignat'yev: "In the Race for the Harvest"]

[Text] The first group of trucks left Moscow yesterday for harvesting the new harvest.

It is seven in the morning. A column of trucks is leaving the gates of the central truck base of Mosenergo [Moscow Regional Administration of Power System Management]. The first is carrying a colorful sign saying, "We'll complete the 1984 harvest on time and without losses." Shiny ZILs [Automobiles made by the Moscow Automobile Plant imeni I. A. Likhachev] and KamAzes [Automobiles made by the Kamsk Automobile Plant] are being sent in the direction of the Moscow-Riga station. Loading began precisely at nine. A powerful railroad crane lifts each multi-ton truck easily, as if it were bits of fluff, one after another and carefully places it on a platform. Three to five minutes are needed for each. In this way in 2 hours a long line had been formed.

"This is not the first time that we are sending our trucks to harvest," says the director of the Central Truck Base of Mosenergo, Vladimir Alekseyevich Demin. "As a rule, the best drivers are singled out for this and equipment is carefully prepared. This time they will be working in the fields of Stavropol Kray."

Externally it is easy to distinguish the trucks that are to participate in the race for the harvest. On each truck the sides are built up and a silhouette of a golden ear, a unique harvest emblem, is drawn. Nearby is a sign saying, "Kiev Oblast. Harvest 1984." In about 5 days the trucks will be sent directly from the station to the kray's kolkhozes and sovkhozes. Moscow workers will have to work at an intensive pace. The harvest work day begins at 4 a. m. and ends at about midnight. In the fields there will be no time to correct problems. This is why drivers check and recheck trucks here at the station.

When we spoke with first-class drivers and shock workers of communist labor V. Ye. Kaminskiy, A. G. Kudryashov and M. N. Shets', their trucks were being readied for loading. They have been joining harvest operations for over 15

years now. They have had to harvest grains in the Transvolga area and in the Kuban', in Siberia and in Kazakhstan, and now they were setting off for Stavropol Kray.

An entire repair brigade, which together with drivers is being sent to Stavropol, will help drivers with harvest work. A "first aid vehicle" for harvest equipment has been equipped with spare parts and components, and machines will be serviced directly in the fields.

The first railroad platform cars with trucks left at 3 p. m. Trucks from Kievskiy and Sovetskiy rayons are earmarked for Stavropol Kray. Driving crews from Babushkinskiy Rayon went to Krasnodar Kray. Four trainloads will now be sent off from Moscow each day. Today the loading of the next group will begin. Various enterprises in the capital have sent over 400 machines. Tomorrow the same number of trucks will be readied. This year over 5,000 Moscow drivers will be working in the fields of the Kuban' and the Northern Caucasus.

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CSO: 1824/607

POST HARVEST CROP PROCESSING

COMPLETE READINESS FOR HARVEST OPERATIONS STRESSED

Moscow SEL'SKAYA ZHIZN' in Russian 8 Jun 84 p 1

[Article: "Full Readiness"]

[Text] The RSFSR Council of Ministers passed a resolution on supplementary measures to secure the harvesting and procurement of agricultural products and feeds in 1984 and to successfully complete the coming overwintering of livestock. It is essential to accelerate the repair of combines and other equipment and to bring them up to complete readiness no later than 2 weeks prior to the beginning of feed harvesting and procurement. Units must be equipped with trained machine operators. Measures must be taken to fulfill and overfulfill plans for the procurement of hay, haylage, silage, grass meal and other feeds by every enterprise and to utilize all reserves for the supplementary replenishment and efficient use of forage resources.

Important demands are being directed at ministries and departments which perform building-installation work in the village. Livestock-raising facilities, which are to be put into operation this year according to the plan, must be put into operation no later than November. Structures for feed storage should be put into operation no later than September.

The resolution also determined goals for the RSFSR ministries of agriculture, the fruit and vegetable industry and motor vehicle transport and for local soviets with regard to the preparation of trucks for harvesting operations. The necessity of raising the quality of planning railroad shipments of grain, potatoes, vegetables and fruit and of eliminating countershipments and other inefficient shipments of the same types of agricultural products was noted.

The republic's council of ministers resolved to take measures in grain-reception enterprises to achieve more rapid weighing and unloading of grain from large-capacity trucks, tractor-trailer rigs and railroad cars. A special effort must be made for the timely and proper determination of grain quality, especially of durum wheat as well as of strong and more valuable varieties.

The executive committees of soviets of people's deputies in beet-sowing regions must develop and confirm digging schedules and goals for shipping beets, and secure their fulfillment. The harvesting of roots before 20 September must be achieved in volumes necessary to secure the uninterrupted work of sugar plants.

POST HARVEST CROP PROCESSING

CENTRALIZED MANAGEMENT OF HARVEST TRANSPORT DISCUSSED

Moscow SEL'SKOYE KHOZYAYSTVO ROSSII in Russian No 6, Jun 84 pp 4-5

[Article by V. Ponomarenko, worker in VNIETUSKh [All-union scientific research and experimental institute for the technical management of agriculture]: "The 'Center' Manages Transport"]

[Text] One of the shortcomings of motor vehicle transport services for agricultural production is the irregularity in the distribution of goods' transport. For example, in August-September almost one-third of the annual volume is shipped in the republic. Increased needs for rolling stock arise during the period of mass harvesting and feed procurement. During this time the proportion of enlisted motor vehicles reaches 50 percent of the total number of operating vehicles in most oblasts.

A sharp increase in the number of trucks belonging to various departments, and their use in small groups which are subordinate to kolkhozes and sovkhozes in terms of operations decrease the effectiveness of utilizing rolling stock.

A solution to the problem is seen in the elimination of inter-departmental barriers and in improving the management of operations of transport vehicles belonging to various ministries and departments used to ship agricultural loads.

Today in some rayon and oblast APO's [Agro-Industrial Associations] centers for transport management (TsUP), which coordinate the work of transport vehicles in accordance with previously-elaborated plans and daily reports by organizations belonging to the APO, have already been created.

One of the basic functions of TsUP is to coordinate the operations of agricultural enterprises, transport vehicle formations and organizations which accept ready agricultural products for storage, processing or sale. This type of system of interaction between village workers and their partners in industry was tried out for the first time in Krasnokutskiy Rayon of Saratov Oblast. Specialists from the information-computer center of the Transvolga Territorial Transport Administration began to calculate daily hourly schedules for the movement of each transport vehicle participating in shipping. The basic planning information consisted of 50 parameters, which enabled workers to have a complete understanding about the status of the regions's production transport

system for the next 24 hours. Based on specific conditions, each driver was given an hourly schedule which indicated the time he was to arrive at and leave a loading (enterprise) or unloading (elevator) point and the quality of the grain being transported.

With the introduction of schedules, the movement of transport vehicles became organized in the rayon and well-paced work in grain-unloading points and elevators was achieved. A Center for the Management of Grain Deliveries (TsUDZ) was created for the operations management of grain shipments in Krasnyy Kut. All transport vehicles participating in shipping grain from threshing floors to elevators (regardless of departmental subordination) were made subordinate to it. As a result of the reorganization of the transport process, the average daily productivity of a single truck increased from 14.7 to 23.3 tons, the number of trips per day (calculated per truck) increased from 3.67 to 5.82, and the total time spent on duty decreased from 106,700 to 67,200 hours for transport vehicles. The total economic effect of introducing the Saratov method in the rayon comprised over 34,000 rubles during the first year.

Inter-departmental coordination of the activities of participants in the harvesting-transport and procurement processes is being implemented presently not only for grain transport. For example, in Glavlenavtotrans [Main Administration of Flax Truck Transport] each year a center for operations management of harvesting processes, transport, long-term storage and sales via the vegetable trade network is created. The Leningrad Central Computer Center of Glavlenavtotrans determines daily transport vehicle needs for shipping products and analyzes the work of agricultural, transport and procurement enterprises.

Leningrad workers are forced to deal with problems that are discussed under more difficult conditions--under conditions of territorial dispersion of vegetable sovkhozes, differences in the nomenclature of loads and in methods for shipping products and a great number of unloading points. This makes daily calculations on needs for transport vehicles more difficult and almost impossible without the use of electronic computer technology.

The computer has helped not only to organize the work of all participants in the harvesting-transport-procurement process but also to decrease the time spent on loading-unloading operations. In 1982 an average of 3.8 hours per day was spent on this (per vehicle). A curtailment of idleness enabled workers to free part of the rolling stock for performing other operations.

In Sverdlovsk Oblast the approach to the organization of transport vehicle servicing of kolkhozes and sovkhozes was somewhat different. Here under the management of the oblast executive committee each year oblast and rayon TsUPs are created. The distinctive feature of the operations of these centers is the operations management of the work performed by transport vehicles to implement not only inter-enterprise but intra-enterprise technological shipments as well. This has enabled them to organize the more effective operation of transport vehicles that are utilized for harvesting work.

In addition to the creation of temporary centers, in the RSFSR permanent centers are being created. In Krasnodar and Stavropol krays an inter-departmental service of the centralized management of transport-vehicle shipments has been in charge since 1976 of year-round operations management of transport vehicles servicing agriculture. For example, belonging to this service in the Crimean RAPO [Rayon Agro-Industrial Association] of Krasnodar Kray are groups for operations management and control, dispatchers and groups for collecting information. At the present time there are 7 persons working in the center.

Of course, the number of workers in various centers varies. Thus, the staff of shipment operations management of Glavlenavtotrans is represented by groups for collecting information, for preparing data on operations planning, for calculating transport vehicle work on electronic computers and for coordinating the activities of participants in the transport process, dispatch and operations analysis. During the harvest period dispatchers of sovkhozes, transport vehicle subdivisions and procurement organizations of the Leningrad Oblast Production Administration of the RSFSR Ministry of the Fruit and Vegetable Industry are subordinate to the center. This is why the number of workers in the center fluctuates between 60 and 80 persons.

Similar differences in staffing are determined to a significant degree by the scale of work performed by the center and by its functions.

Basically, a list of TsUP functions includes preliminary annual and seasonal planning of transport work and needs for rolling stock, 10-day, daily and daily shift planning for rolling stock, controls over the course of work and operations regulation of transport processes and an analysis of the work of rolling stock. In addition, some centers fulfill functions such as controlling the technical condition of the rolling stock placed in the operating line and as traffic safety of transport vehicles.

As practice has shown, the centralization of transport operations management has enabled workers to improve the quality of services to clients. At the same time there was an increase in the effectiveness of the work of the truck fleet. In those regions where TsUPs were in operation during mass harvesting the productivity of trucks increased by an average of 40 percent, the processing capacity of elevator lines increased by a factor of 1.3 and the time needed to procure grain decreased by 1 week. The economic effect achieved as a result of the introduction of new organizational forms for managing harvest-transport and procurement processes equalled about 7 million rubles in 1982 alone in the republic.

In summarizing the work of TsUPs we can state with certainty that their creation everywhere is a very important task. In order to accelerate the achievement of this goal it is essential to "arm" practice with recommendations which must clearly establish the functions of the TsUP, to provide a basis for its structural and staff composition and to elaborate a methodology for evaluating the work quality of centers. It is also essential to determine measures for morally and materially stimulating the activities of TsUP workers, to provide a foundation for financing the work of centers and to validate the expediency of utilizing computers.

POST HARVEST CROP PROCESSING

PROGRESS IN HARVEST TRANSPORT EVALUATED

Moscow SEL'SKAYA ZHIZN' in Russian 23 Jun 84 p 1

[Editorial article: "The Harvest Transport Conveyor"]

[Text] Village workers are coming to a decisive stage in the struggle for the harvest in the fourth year of the five-year plan. In the southern enterprises combines are already moving into the fields. Mass harvesting is approaching. Its successful completion, pace and quality will depend greatly on the precise operation of truck transport, which is an important link in the harvesting conveyor. Everything which is cultivated must not only be harvested on time but also preserved in its entirety and moved efficiently and without losses to procurement points and to locations for storage, processing and use.

At one of the recent regular meetings of the Politburo of the CPSU Central Committee additional measures were determined for securing truck transport of agricultural products during this year's harvest period in the RSFSR, the Ukraine and Kazakhstan. Republic and local party, soviet and economic organs have been assigned the task of organizing specific work in each labor collective with the objective of bringing all existing transport up to dependable status on schedule, of achieving its effective use in transporting the harvest and of demonstrating constant concern for the people who are involved in the shipment of agricultural loads.

During the harvest period thousands of envoys from motor vehicle transport enterprises and organizations of various ministries and departments and from Goskomsel'khoztekhnika [State Committee of the Agricultural Equipment Association] work shoulder to shoulder with village machine operators and drivers. The main goal is to skilfully direct their joint efforts at achieving high production indicators, to extensively utilize leading methods of labor organization and socialist competition and to actively advertise the innovative searches of the best drivers' collectives and of masters of grain lines.

The so-called Saratov system of centralized operational planning of truck shipments during the harvesting period along the route field-threshing floor-elevator is very effective economically. The system achieves a coordinated interaction among truck drivers, grain farmers and procurers. In all regions centers are being created in good time to manage the shipment of agricultural

products; at the disposal of these centers will be specially-created harvesting truck detachments equipped with trucks regardless of their departmental subordination. This enables workers to maneuver transport widely without tolerating idleness.

The work of all trucks recruited for harvesting and the shipment of grain to state granaries are achieved strictly according to hourly schedules. They are composed with the help of electronic computers for every 24-hour period in accordance with specific conditions that have developed in the fields, on threshing floors and in elevators, based on operations information received at the oblast computer center concerning the quantity and quality of threshed grain, the number of trucks ready to move and the processing capacity of technological lines in grain-reception enterprises. As a result drivers do not have to wait in lines at elevators, as occurred in the past, and the same is true for loading and unloading. The productivity of trucks increases by 20-30 percent.

Practice shows that a centralized automated system of planning and management of transport-procurement operations, supplemented by collective contracts, opens up broad possibilities for completing harvesting without losses and with the smallest labor and material expenditures. It is being successfully introduced in Kuybyshev, Chimkent, Tselinograd, Kiev and other oblasts. It should be noted that the progressive form of labor organization of drivers, introduced by Saratov innovators, has also proven itself well in the shipment of potatoes, sugar beets, corn seed and rice.

At the same time, as attested to by letters to the editor, trucks are not yet used highly efficiently and to full capacity everywhere during the harvesting period. Frequently truck drivers work according to old methods and remain to the side of progressive experience. This applies in particular to a number of oblasts in the Non-Chernozem Zone of the RSFSR and the Kalmyk and Dagestan ASSR's.

At present it is very important that all trucks and trailers be in use, that they be included in work from the first days of harvesting operations and that they be used with greatest effectiveness. Everything must be done to avoid repeating last year's shortcomings, when at the height of harvesting a large number of trucks remained idle as a result of frequent breakage and the absence of necessary spare parts, accumulators and tires.

Truck crews from Krasnodaravtotrans [Krasnodar Motor Vehicle Transport Association] have prepared carefully for the harvest. Public technical commissions tested the dependability of truck systems and units and checked to see whether bodies were sealed. A dependable fund of spare parts was created on repair bases. Mobile shops were provided with experienced master-adjusters and metal craftsmen. Mobile refuelling stations, cafeterias and field personal services will be sent to grain lines. Hourly schedules for the use of equipment foresee two-shift work.

Operations statistical data speaks of the fact that in most republics, krays and oblasts the preparation of the truck fleet for intensive harvesting work

is being carried out according to the indicated schedule. Nevertheless, in some oblasts of the RSFSR and Kazakhstan the repair of trucks is being delayed. It is the duty of local party, soviet and economic organs and of directors and specialists of kolkhozes, sovkhozes and associations of Sel'khoztekhnika to take supplementary measures to accelerate the return to operation of trucks and trailers. Dependable supplies of fuel-lubricating material must be created ahead of time, the exchange fund of working systems and parts must be replenished and roads and approaches must be repaired.

The work days of farmers and all APK [Agro-Industrial Complex] workers are filled with fervent striving to fulfill and overfulfill goals related to the sale of grain and other products to the state with honor. The country's transportation workers are called upon to achieve the complete preservation of the cultivated harvest, to concentrate efforts on improving the management of transport, on introducing progressive experience and on using each truck effectively.

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LIVESTOCK FEED PROCUREMENT

HAY, FEED PROCUREMENT IN VARIOUS RSFSR REGIONS

Volgo-Vyatskiy Area Commentary

Moscow SOVETSKAYA ROSSIYA in Russian 9 Aug 84 p 1

/Commentary by I.G. Utochkin, deputy chief of the Main Administration for the Volgo-Vyatskiy area/

Text As noted during a recent meeting of the Board of the Ministry of Agriculture, many Kirov farms are displaying a lack of organization in the procurement of feed, especially hay and haylage. This work is being carried out at a slow rate in Falenskiy, Verkhnekavskiy, Shabalinskiy and Afanasyevskiy rayons. The output per mowing machine is low. The laying away of mixed silage has not been organized, the forced ventilation and pressing of feed is being introduced into operations extremely slowly and only weak control is being exercised over the quality of the feed. There are more than 500,000 hectares of natural pasture land in the oblast and yet the majority of the meadows have been neglected. They have become overgrown with bushes and undergrowth and the tasks for radically improving the haying and pasture land throughout the oblast are not being carried out. For example, last year they were fulfilled by only five percent.

The workers in Gorkiy Oblast are also lagging behind the estimated rates for the cutting down of grasses. The leaders of backward farms are trying to blame their failures exclusively on the caprices of the weather. It is true that frequent rainfall does interfere with the feed procurement operations. But these are only increased difficulties -- and they do not prevent the work from being carried out. The example set by leading workers confirms the fact that it is possible under the existing conditions to increase the production of feed successfully. For example, the kolkhozes Novyy Put' in Zvenigovskiy Rayon, Znamya in Kuzhenerskiy Rayon in the Mari ASSR, the Krasnyy Oktyabr' Kolkhoz in Kumenskiy Rayon in Kirov Oblast and many other farms over-fulfilled their hay production plans.

In order to counter the inclement weather, special importance is being attached at the present time to introducing progressive technologies into operations in all areas. Meanwhile, in this same Kirov Oblast, the forced ventilation method was employed last year for drying out only 0.6 percent of the hay procured and this year -- 3 percent of the amount procured.

There are approximately 1,500 units available on the region's farms for the drying of grasses and for producing vitamin feeds. They can be operated during all types of weather and yet one fifth of their number lie idle for one reason or another. The preparation of vitamin meal and granules made from it has been organized especially poorly in the Mari ASSR and the Mordovian ASSR.

By no means is use being made of all of the reserves and opportunities that are available for ensuring that more extensive use is made of chemical preservatives during ensiling operations. Compared to the Mari ASSR where one half of the silage was treated with chemical preservatives, in Kirov and Gorkiy oblasts -- less than 10 percent.

Quite often, many farms tend to simplify the feed preservation technology: the grass is not always chopped during ensiling operations, the fodder is not tamped down adequately, the schedules for establishing trenches are dragged out and they are covered in a careless manner. It is obvious that such actions result in the production of low quality feed. A check has revealed that 40 percent of the hay procured can be classified as being of 3d grade or sub-standard in terms of quality. These shortcomings are further explained by the fact that a majority of the kolkhozes and sovkhozes do not have their own express-laboratories and this inhibits effective control over the quality of the feed. In Kirov Oblast, for example, 250 express-laboratories should be in operation this year and yet only 62 are actually functioning. Thus it bears mentioning that extensive use should not be made of the measures available for issuing material incentives for high quality feed.

Special attention is being given this year to the preparation of mixed silage for hogs. The experience of leading kolkhozes and sovkhozes reveals that this measure can result in a large savings in the use of grain. For example, last year the kolkhozes and sovkhozes in the Mordovian ASSR laid away 3.9 tons each per sow, the farms in Medvedevskiy Rayon in the Mari ASSR -- 4 tons each and the Alekseyevskiy State Breeding Plant -- 5.4 tons. And yet in Kirov Oblast the amount of mixed silage per sow is only 0.6 tons. Again this year, not everyone is making a concerted effort to correct the situation. The preparation of trenches is being carried out very slowly in Gorkiy Oblast and in the Chuvash ASSR, with one half or even two thirds of them still not ready to receive the new crop.

West Siberia Region Reviewed

Moscow SOVETSKAYA ROSSIYA in Russian 2 Aug 84 p 1

Commentary by S.M. Ivanov, chief of the Main Production Administration for the West Siberian Region of the RSFSR Ministry of Agriculture/

Text/ The kolkhozes and sovkhozes in the west Siberian region are carrying out feed procurement operations on a vast area of 7.3 million hectares. The first cutting of sown and natural grasses has been harvested from more than one half of the areas allocated for this purpose. The hay and vitamin grass meal already laid away constitutes 55 percent of the plan and the haylage -- 70 percent.

The best work is being carried out in Tomsk Oblast. Here the equipment is being maneuvered in a skilful manner and the personnel, during inclement weather, are rapidly shifting from the laying in of hay to the procurement of haylage and vitamin grass meal. For example, 15 quintals of feed units have already been laid away per standard head of cattle in Shegarskiy Rayon.

Many other examples of industrious work are to be found throughout the region. In Novosibirsk and Kemerovo oblasts, the watch method is being employed extensively for procuring feed: large detachments of machine operators and mowing personnel from cities are going to remote areas and cutting down the grasses on distant meadows and on the floodplains of rivers. In the Altay Kray, the hay is being procured in large rolls on an extensive scale. Thus, in Ust-Koksinskiy Rayon they are producing up to 300 rolls of hay daily, each weighing 3 quintals.

Special monthly campaigns aimed at improving feed procurement operations have been announced for all areas. The brigades and teams have been assigned tasks and the work volumes defined. The moral and material incentives are being improved and double payments have been established in many collectives for each 500 quintals of forage obtained over and above the plan. The leading kolkhozes and sovkhozes plan on obtaining full-value second cuttings. Towards this end, the watering and applications of top dressings to the grasses have been organized on irrigated lands.

Unfortunately, the caprices of the weather are not being countered in all areas by ingenuity, experience and expertise. The lowest hay mowing rates in the region are in Tyumen Oblast and yet the grasses here are quite good. Weak support in the form of repair services is making it difficult to harvest them during the best periods and with minimal losses. The equipment often lies idle out on the meadows owing to breakdowns or shortages in spare parts and units. The engineering service for the Tyumen farms and the oblast's Sel'khoztekhnika Association are not carrying out their tasks with the proper degree of efficiency or coordination. As a result, the expenditures of manual labor are great and the assistance of patrons -- workers from industrial enterprises -- cannot compensate for the shortage of the required machines out on the haying lands. As yet, only weak control is being exercised over the quality of the forage -- the results of analyses are delivered to the farms on a very tardy basis and this makes it difficult to respond in a rapid manner and correct the haying technology. The agricultural organs and the kolkhozes and sovkhozes in Tyumen Oblast must undertake urgent measures aimed at correcting the existing situation.

In western Siberia, this year's plans call for not less than 22-25 quintals of feed units to be procured for each standard head of cattle. This is a realistic task and yet in order to carry it out it will be necessary to complete the harvesting of grasses mainly prior to 15 August, at which time the mass harvesting of grain crops will commence. Thus each day is of paramount importance at the present time.

Novosibirsk Oblast Feed Procurement

Moscow SEL'SKAYA ZHIZN' in Russian 7 Aug 84 p 1

[Article by P. Chernov, Novosibirsk Oblast: "A Recalled Banner"]

/Excerpts/ Feed procurement -- a key task. "To recall the challenge red banners of the oblast CPSU Committee, the oblast executive committee and the oblast council of trade unions from Ust-Tarkskiy and Cherepanovskiy rayons, awarded based upon the results of the socialist competition among the oblast's rayons for feed procurements during 1983."

(From the decree handed down by the bureau of the Novosibirsk Oblast CPSU Committee, the oblast executive committee and the presidium of the oblast council of trade unions).

I happened to visit the sovkhoz meadows in Cherpanovskiy Rayon towards the end of the first decade in July. The farm leaders were not displaying special concern over the fact that the rayon had fallen behind in the procurement of feed. At the Krutishinskiy Sovkhoz, a considerable portion of the sown grasses had been cut down by harvesters into windrows. This work had clearly been hindered by frequent rainfall. Three to four good sunny days were required in order to dry out the grasses in the windrows. And indeed the grasses could have been harvested using double or triple-bar mowing machines, in which case they would have dried out more rapidly; subsequently they could be raked up using windrow rakes and then stacked. The equipment could have been shifted over to the laying in of haylage. But the sovkhoz did not choose to undertake either of these actions, but rather it preferred to await more favorable weather.

Zealous masters of their work use AVM /forced ventilation machines/ during all types of weather for the production of vitamin grass granules. Yet the Voskresenskiy Sovkhoz procured only a miserly amount of this feed. The powerful machine was allowed to remain idle.

If you please, the chief reason for the delay in procuring the feed had to do with the fact that the farm had developed its technology without taking into account the true situation and without glancing into the future. Just as in dry years, it was assumed that the hay would be procured using the traditional method. But the weather upset the plans. The summer turned out to be a rainy one. And it turned out that many of the sovkhozes were not prepared for this development; the grasses grew in abundance out on the meadows and fields and the feed procurement specialists were unable to harvest them, since they were not familiar with the new feed production technologies.

Leading workers are to be found in each rayon. Even in this same Cherepanovskiy Rayon, there are those whose example can be followed in the interest of ensuring efficient feed procurement operations. The Karasevskiy Sovkhoz is successfully replenishing its supplies of hay and haylage. The grasses on the farm are being cut down using mainly bar mowing machines. Last year this sovkhoz succeeded in creating carry-over forage funds -- approximately 10,000 quintals of hay. This year again the feed procurement specialists will do their job: the farms will furnish the feed. It bears mentioning that the Karasevskiy Sovkhoz is a neighbor of the Krutishinskiy Sovkhoz in Cherepanovskiy Rayon. As we have already mentioned, work at the latter is

proceeding very poorly. Unfortunately, the Krutishinskiy leaders are not taking advantage of the experience accumulated by their neighbors.

There is no way that one can justify the sluggishness being displayed in the procurement of feed on farms in Chulymskiy Rayon, where the workers were very late in commencing their haylage storage work. Meanwhile, the neighboring Kargatskiy and Novosibirskiy rayons have already fulfilled their plans for laying in haylage. The farms in Zdvinskiy Rayon are in the process of completing this work.

The farms in Novosibirskiy, Vengerovskiy, Zdvinskiy and Dovolenskiy rayons are the leaders with regard to the number of feed units per standard head of cattle and this is the most reliable indicator for the work performed by forage procurement specialists. Severnyy, Kyshtovskiy, Karasukskiy and Baganskiy rayons are lagging behind. For the oblast as a whole, 860,000 tons of hay had been stacked by the end of July and this represents slightly more than one half of the plan. The task of the laying in of haylage has been fulfilled by 93 percent. Roughly 79,000 tons of grass concentrates, or 54 percent of the task, have been delivered to the forage storehouses.

Far East Official Commentary

Moscow SOVETSKAYA ROSSIYA in Russian 22 Aug 84 p 1

/Commentary by V.M. Kon'kov, deputy chief of the Main Production Administration for the Far East Region of the RSFSR Ministry of Agriculture: "Feed Procurements -- A Common Concern"/

/Text/ The far eastern farms are striving to create a reliable supply of feed for public animal husbandry. And although there are many difficulties, nevertheless the grass cutting rates for this season are higher than those for last year. This was achieved as a result of improvements in the organization of labor and more skilful use of the equipment. This year almost one half of the forage was procured by brigades and teams which operated on the basis of a collective contract.

The largest quantities of grass were cut down by the machine operators in Khabarovsk Kray and Amur Oblast. The farmers in the Priamurye region are deserving of special mention, since they had to work under very unfavorable weather conditions. In some rayons the monthly norm for precipitation fell within a period of 24 hours. However, unlike the kolkhozes and sovkhozes in Ussuriyskiy Rayon in the Primorye region, here the workers succeeded in countering the inclement weather conditions. Even the overflowing of rivers did not interfere with their work -- the fodder and vitamin grass meal were delivered to the farms and storage areas aboard launches and boats. The hay procurement plan was also carried out successfully -- an average of more than 2 tons per cow was laid away. These then are the results of maneuvering the equipment and personnel and introducing progressive technologies. In particular, it should be mentioned that the Mikhaylovskiy forage procurement technology proved to be of great assistance this year to many farms in the Far East. And in those areas where this technology was either violated or not used whatsoever, losses were sustained with regard to both the quality and the quantity of the feed supplies obtained.

The laying in of haylage has not proceeded well in all areas. On farms on Kamchatka, the amount placed in storage constituted only 18 percent of the requirements. Meanwhile, special attention was given to this type of forage in Sakhalin Oblast where such action will fully prove its worth during the coming wintering period. The Sakhalin workers are skilfully using their haylage towers for storage purposes and they are completely mechanizing the labor-intensive processes.

At the present time, the greatest amount of feed units per standard head of cattle has been procured in Khabarovsk Kray and also in Amur and Sakhalin oblasts. Here the plans call for the forage supplies to be augmented considerably by means of corn silage and fodder beets.

However, active use is not being made of the available reserves in all areas. In the Primorye region, for example, the sowings of silage crops and root crops have not been assigned to specialized teams. The farm administrations are not concluding agreements with the machine operators, but instead are diverting them to other work. Thus it comes as no surprise to learn that on many fields the beets and pumpkins have become overgrown with weeds.

The farmers must not yield to a complacent attitude. A search must be undertaken in all areas for the means for supplementing the forage supplies. The after-growth of grasses, which is used mainly for hay and haylage, can and must be cut down. Mixed silage has proven its worth -- this year the region's plans call for not less than 150,000 tons of such silage to be procured.

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LIVESTOCK

HOG RAISING PROMOTED IN INDUSTRIAL SUBSIDIARY ENTERPRISES

Moscow SVINOVODSTVO in Russian No. 8, Aug 84 pp 2-3

[Article: "Reserves of Subsidiary Enterprises"]

[Text] Each year the contribution of subsidiary enterprises of industrial, trade and other enterprises and organizations becomes more weighty with regard to the implementation of the USSR Food Program. In recent years thousands of subsidiary enterprises have been organized, in which hogs are fattened primarily on food wastes; i.e. wastes are turned into profits. Enterprises which have subsidiary enterprises obtain a large quantity of fresh agricultural products if, of course, production is organized well and is managed on a scientific basis and with a consideration of progressive experience.

A great deal speaks of the necessity to develop subsidiary enterprises. However, in the process of their operation many problems do arise and do hinder their continued development.

Practice has proven that in many subsidiary enterprises pork production is unprofitable. This is explained in many ways. Small fattening enterprises are unprofitable because in them all work is done manually and it is necessary to maintain a large staff of service personnel. Moreover, in many subsidiary enterprises hogs are fattened only using purchased mixed feed. In feed mixtures for hogs there is an absence of food wastes as well as of wastes from dairy plants, meat combines, livestock slaughtering points and fruit and vegetable bases. This type of inefficient feeding of hogs results in increased pork prices.

Not a small role is played also by the impossibility of using the necessary machines and mechanisms in small facilities adapted for use as hog pens.

Frequently, small enterprises strive to organize their subsidiary enterprises without fail. However, practice shows the erroneous nature of such an approach.

There are enterprises which deal in a business-like manner with these problems. For example, in the Vorkutaugol' Association mines have large subsidiary enterprises for fattening hogs. These subsidiary enterprises annually produce over 630 tons of fresh-killed pork for the tables of miners. It is a weighty addition. There are small enterprises here too, but they did not begin to

each build themselves a subsidiary enterprise. Let us take, for example, the geophysical expedition. The enterprise is a small one. Having taken everything into account here a conclusion was drawn that a small hog raising point would not be profitable here, would be expensive and should not be built here. But the idea arose to join forces with another larger enterprise located nearby--the Vorkutinskoye Subsidiary Hog Raising Enterprise. These two enterprises concluded a contract according to which the expedition acquires and supplies miners with a certain number of piglets for fattening, the number depending on the planned amount of pork production. Moreover, the expedition supplies the subsidiary enterprise with transport vehicles for shipping food wastes, mixed feed and waste from liquid manure tanks, as well as with workers. This type of system of shared participation has proven itself fully.

In recent years many enterprises have built (and are now building) modern hog raising enterprises through joint efforts. This is less expensive and provides advantages for all participants in cooperation. Such hog raising complexes are operating successfully in Kursk, Volgograd, Penza and other oblasts.

In the creation and development of subsidiary enterprises in industrial enterprises a greater and greater role is being played by the patronage aid of kolkhozes and sovkhozes. This form of aid provides great advantages. For example, the Gorkiy Plant of Electronic Installation Instruments built a modern hog fattening point. The approach method involves the full production cycle. Animals are fattened primarily on feed wastes. The subsidiary enterprise was allocated a 20-hectare plot of land in the neighboring Sovkhoz imeni 60 Letiya SSSR of Kstovskiy Rayon. Thus this sovkhoz helps the subsidiary enterprise to cultivate the soil and to raise grain. In turn the plant provides help to village workers with regard to the mechanization of labor-intensive processes and equipment repair.

Many industrial enterprises make their contribution to the implementation of the Food Program. Among these is the Kuznetskiy Metallurgy Combine. Its Metallurg Sovkhoz fully supplies workers' cafeterias with many types of agricultural products. For subsidiary enterprises which belong to industrial enterprises, feed for hogs is not a problem. They fatten animals using feed waste products. For example, the cafeteria trust of Zavodskiy Rayon fattens 700-900 head annually using food wastes. Moreover, the food wastes are collected by the enterprises themselves.

There are enterprises here which built subsidiary enterprises through joint efforts. For example, Cafeteria Trust Number Two organized a hog raising farm jointly with the Mine imeni Ordzhonikidze. The miners built the facility and installed the equipment, and the trust has taken upon itself the responsibility of obtaining feed. This type of cooperation is advantageous for both enterprises. It should also be noted that many hog fattening subsidiary enterprises have organized their own reproduction of young animals.

The subsidiary enterprises of the trade system are making a greater and greater contribution to the fulfillment of the Food Program.

One of the best enterprises within the system of public nutrition in the RSFSR is Levoberezhnyy Sovkhoz of Novosibirsk Oblast. Each year it produces about 2,000 tons of pork and saves no fewer than 7,000 tons of grain as a result of the fact that almost 70 percent of the rations of animals being fattened consist of food wastes. The average daily weight gain of hogs reaches 470 grams and the cost of a quintal of weight gain comprises 88 rubles instead of the planned 104 rubles. Such achievements are the result of the mechanization of labor-consuming processes on the farm and of the high level of skill of workers and specialists. Considerable credit also belongs to Director I. Reshetnyak, who has been managing this enterprise skilfully for many years now.

In recent years in Zaporozhye Oblast many industrial and trade enterprises have been actively building and developing subsidiary enterprises. In those places where problems of production organization are dealt with in a business-like manner the results are gratifying. One of the best subsidiary enterprises in the oblast is the Volnyanskoye Raypo [Rayon Consumers' Society]. This enterprise was organized relatively recently on the basis of two former poultry yards, a summer camp and an old elevated tank tower which belonged to the Kolkhoz imeni Il'ich of the same rayon previously. They began by reconstructing the old production facilities into hog pens and putting in asphalt roads and electricity to the pens. In hog pens labor-intensive processes have been mechanized. A new feed shop was built. Food wastes are steamed there; vegetables and other wastes are processed and mixed with mixed feeds. The subsidiary enterprise has several hectares of land on which mainly feed crops are cultivated for green fodder; root crops and grain are produced. Mixed silage is procured in the enterprise for winter. The necessary fleet of agricultural machinery is also at the disposal of the enterprise.

Good labor organization and full-value feeding enable farmers to obtain high average daily weight gains reaching 500 grams and more in feeder hogs. The subsidiary enterprise is growing and gathering strength. Tens of tons of fresh-killed pork are already arriving in stores and enterprises of public nutrition.

More than 6 years have passed since the day the subsidiary enterprise of Kalachinskiy Rayon Consumers' Society, Omsk Oblast, was formed. Here a small collective is working successfully under the leadership of Ye. Eybauer. The hog raising farm is involved in the entire production cycle. This is an educational example for many subsidiary enterprises which have not organized their own reproduction of young because their production activities depend on other enterprises which must sell them young for the purpose of fattening.

In this subsidiary enterprise for the organization of reproduction of piglets a farm was renovated and an additional 115 cubic meters of area were obtained. Now a new facility is being built.

Animals are fattened on food wastes. Moreover, the rations of feeder hogs include forage potatoes, beets and wastes processed by industry. The maximal use of these feed reserves enables us to save a large quantity of concentrates.

Several plants and factories participated in the building and introduction into operation of Penza's Ukhtinka Hog Raising Enterprise. In this enterprise food wastes comprise over 50 percent of animals' rations. In 1 year over 300,000 tons of food wastes are procured, processed and fed. It has been calculated that this saves over 61,000 quintals of concentrated feeds. By using food wastes the enterprise produces over 1,000 tons of pork. Inexpensive feeds significantly decrease the cost of production and 1 quintal of weight gain does not exceed 130 rubles. In achieving such good indicators the mechanization of all labor-intensive processes did play a role.

The subsidiary plants of the Mari Union of Consumers' Societies are operating successfully. At the present time the system of the Mari Consumers' Union consists of over four large subsidiary enterprises and several dozen hog fattening points. Over 50 percent of hog rations consist of food wastes and wastes from the food industry.

In the autonomous republic there are 36 subsidiary enterprises. Almost all rayon unions of consumers' societies are involved in meat production. They supply public nutrition enterprises with hundreds of tons of fresh pork each year. Each year good indicators are achieved by the subsidiary enterprise of the Morkinskiy Rayon Union of Consumers' Societies. Here the young that is being fattened was produced in the enterprise itself. Moreover, a portion of the raised young is sold to the population. In the rayon union of consumers' societies a great deal of attention is given to a stable feed base. Potatoes, rye and oats are cultivated. Food wastes are the basis for the rations to fatten hogs. The maximal utilization of inexpensive feeds affects the cost of production--1 kilogram of pork costs only 1 ruble 80 kopecks.

Each year the subsidiary enterprises of the Mari-Turekskiy and Novotor"yal'skiy rayon consumer's societies increase their production of pork. Unfortunately, not all cooperative organizations of the autonomous republic give the necessary attention to the development of subsidiary enterprises. Consumers' societies of Sernurkiy, Kilemarskiy, Paran'ginsky and Medvedevskiy rayons do not fulfill plans for pork production from year to year. The workers of cooperative organizations are hardly involved in the collection of food wastes. They try to fatten animals using only mixed feeds. This results in the unjustified increase in production costs and in a large expenditure of feed. For example, in Sernurkiy Rayon the cost of 1 quintal of weight gain is 5 rubles with an expenditure of 16 feed units.

Many of our country's industrial enterprises are actively organizing and successfully developing subsidiary enterprises. The plant's or factory's "village shop" must produce not only fresh but also inexpensive essential products as well. The enterprises of the city of Volzhsk, Volgograd Oblast, are organizing the operation of their subsidiary enterprise in just this way. The availability here of modern production facilities where all labor-intensive processes are fully mechanized and where there is maximal use of food waste and green and succulent feeds in hog rations enable farmers to achieve an average daily weight gain in feeder hogs of 520 grams. At the present time the subsidiary enterprise is organizing its own reproduction of young.

This is not the first time that the subsidiary enterprise of Azovstal' Plant in the city of Zhdanov, Donetsk Oblast, has supplied the tables of metallurgists with fresh pork. The subsidiary enterprise fattens 3,200 hogs per year. The basic feed for animals is food wastes, wastes from vegetable bases and market storehouses, wastes from stores, beer dregs and whey. The use of inexpensive feeds provides the opportunity to obtain inexpensive pork. For example, the cost of 1 kilogram of weight gain equals 1 ruble 2 kopecks as compared to the planned 1 ruble 98 kopecks.

Forestry workers also make their contribution to the implementation of the Food Program. Many industrial timber enterprises and lumber enterprises are increasing the pace of pork production in their subsidiary enterprises. The Irkutsk Lumber Enterprise has its own "meat shop." The hog farm in the workers' supply section sells over 1,300 quintals of fresh-killed pork per year. Average daily weight gain in animals being fattened reaches 540 grams with the expenditure of a little over 5 feed units per kilogram of weight gain. Fattening is stopped when animals reach a weight of 120 kilograms. It should be noted that the subsidiary enterprise itself obtains and raises piglets for fattening.

There are still many reserves in the work of subsidiary enterprises. Their use will give us the opportunity to greatly increase production output and decrease its cost.

Let us take as an example the hog fattening base, Obshchestvennoye Pitaniye of Petropavlovsk-Kamchatsk. For objective and subjective reasons the plan for gross meat production was not fulfilled by only 0.2 percent during 3 years of the current five-year plan. The achieved 99.8 percent equalled 304.6 tons as compared to the planned 305 tons. The year 1983 was a crucial year for the collective; the pork production plan was surpassed by 30 tons and 24 tons more pork was produced than in 1982. This type of sharp turnaround in the increase in meat production was greatly affected by introducing brigade contracts. The wages of each worker were made dependent on his individual contribution to the common results, which were determined by the coefficient of labor participation. The size of wages and bonuses is determined at a brigade soviet, which decides production as well as public questions. A new form of labor organization has enabled the administration and public organizations to create a good labor attitude and a friendly reciprocity in the collective. People began to work with initiative and to have a more responsible attitude toward their assigned tasks.

In any matter reserves must be found, seen and efficiently utilized. In the subsidiary enterprise workers know how to do this. For example, because of the shortage of facilities production output was hindered. It was then decided to organize the summer camp upkeep of hogs. In addition, during warm parts of the year hog fattening was organized for adapted storage facilities. As a result of this an additional 20 tons of pork was obtained. The skilful organization of labor, good care and upkeep of animals and their full-value feeding provide the opportunity for achieving large average daily weight gains in hogs (450 grams) with the expenditure of no more than 5.4 feed units per quintal of weight gain. It should be said that animal rations consist primarily

of food wastes (63 percent). Last year 159 tons of pork were delivered to enterprises of public nutrition in the city of Petropavlovsk-Kamchatsk.

Unfortunately, subsidiary enterprises are not being given the attention they deserve everywhere. In Komsomol'sk-na-Amure there are several subsidiary enterprises. Almost all of them are small and organized in adapted facilities; all work related to the fattening of hogs is done manually. Practically all of the subsidiary enterprises are unprofitable. It can be no other way in such subsidiary enterprises. For example, in the subsidiary enterprise of Building Trust Number 6 only 50 hogs are being maintained, but 10 persons service them. Of course all problems would be solved more easily if instead of small ones, large enterprises would be created, making it possible to use all modern means for mechanizing labor-intensive processes and to manage hog raising on an industrial basis.

The practical experience of recent years has shown that in increasing the country's meat resources subsidiary enterprises are playing an ever-increasing role. In those places where their directors pay the necessary attention to this important question, "village shops" supply workers' tables with fresh products in sufficient quantities.

Subsidiary enterprises are a significant reserve for increasing agricultural production output and they should be developed and improved in every way possible.

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AGRO-ECONOMICS AND ORGANIZATION

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PRODUCTION COSTS, PURCHASE PRICES IN HOGBREEDING COMPLEXES

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 7, Jul 84 pp 66-69

[Article by N. Makarova, senior scientific worker of VNIESKH [All-Union Scientific Research Institute of Agricultural Economics]: "The Special Characteristics of Forming Procurement Prices for Products From State Hog-Raising Complexes"]

[Text] The materials of the 26th congress and the decisions of the May 1982 and subsequent plenums of the CPSU Central Committee note the necessity to consistently improve procurement prices for agricultural products and to improve their economic foundation with the goal of strengthening the effectiveness of cost-accounting stimuli.

In connection with the development of the processes of concentration and industrialization of agricultural production, objective conditions are being created for principally new approaches to questions of price formation for products of specific formations such as large state livestock-raising complexes with a typical industrial technology of production. The proportion of complexes in the production and procurement of agricultural products is growing ceaselessly. The proportion of state complexes in the total volume of pork sales to the state by USSR sovkhozes increased from 34.2 percent in 1979 to 42.8 percent in 1982.

The specificity of complexes in comparison to kolkhozes and sovkhozes, which carry out production in traditional, non-industrial conditions, consists of principally new production techniques and equipment, of full supplies of concentrated feeds for animals according to zootechnically-based norms, of acquiring the more productive breeds of animals that are suitable for industrial upkeep and of staffing with highly trained cadres of workers and specialists. Another special feature of complexes is that they are built according to standard designs which reflect the newest achievements in scientific-technical progress. This enables them to achieve planned productivity in the entire herd of animals with minimal expenditures of monetary, labor and material resources and with minimal planned parameters for production costs.

According to 1982 results, the average daily weight gain of hogs on the hoof being raised and fattened in state complexes was 69 percent higher than in

regular USSR sovkhozes; in 1 year 79 kilograms more live weight of hogs, an increase by a factor of 2.4, was sold per delivered head. The expenditure of feed per 1 quintal increase in live weight was 42 percent lower here than in other sovkhozes; direct labor expenditures were lower by a factor of 5. As a result, the full cost of 1 quintal of sold live weight of hogs in state complexes turned out to be 30 percent lower than in sovkhozes, and the level of profitability comprised 28 percent in 1982 whereas at the same time hog raising in other sovkhozes operated at a loss. In comparing the effectiveness of hog raising in sovkhozes with large state complexes (a capacity of over 54,000 head raised and fattened annually) the advantages of industrial hog raising become even more significant.

In large complexes zonal differences in animal productivity, costs, per unit feed consumption and other indicators of production effectiveness are substantially smoothed over. This is attested to by the data on grouping complexes according to price zones (Table 1).

As we see from the table, deviations from the average basic production-economic indicators by groups of complexes do not exceed 8-9 percent and are related primarily to the incomplete assimilation of planned capacities or to instances of inefficient management in some complexes. Here a relative equalization of indicators is already determined at the planning stage because approximately equal technical-economic parameters, regardless of location zone, are included in plans. Corrections made locally according to individual plans are insignificant and are not characterized by regularity in their regional aspect, i.e. they do not change in a particular way as we move from north to south or from east to west. In this way, natural-climatic conditions of the zones in which complexes are located do not have a significant effect on the results of the work of complexes.

Under these conditions, as a result of the action of zonal differentiation of procurement prices, the economic effectiveness of the work of complexes is determined to a significant degree by the level of procurement prices in effect in a given zone.

In connection with the fact that the average price-list cost of 1 ton of pork classified in category 2, which comprises the largest proportion (up to 70 percent) of pork submitted by complexes, is 60 percent higher in group 3 than in group 1 complexes the differences in profitability of individual complexes located in frigid price zones reach 90-100 points, and on the whole they equal over 40 points between complexes belonging to groups 1 and 3. Profits from sales by group 1 and 3 complexes differ almost threefold for almost the same quantity of pork. In this way, it is the different zonal levels of procurement prices that determine the great differences in the levels of profitability of complexes of one type and size. They provide a higher level for complexes located in favorable price zones. This results first and foremost in an unauthentic reflection of production achievements of complexes in the financial results of their activities. The existing zonal differentiation in procurement prices as applied to large state complexes does not stimulate intensive work and a search for reserves to raise production effectiveness. There is an absence of interest in the collectives of complexes located in

Table 1
The Grouping of USSR State Hog-Raising Complexes Having a
Capacity of over 54,000 Head Raised and Fattened Annually
According to Price Zones, 1982

	Groups of complexes according to level of price-list prices per ton of category 2 hogs, rubles	Average for all complexes		
1,130 to 1,470	1,503 to 1,733	1,870 to 2,640		
Feed expenditure per quintal of weight gain, feed units	505	538	500	518
Direct labor expenditures per quintal live weight gain, man-hours	3.77	4.39	4.15	4.15
Cost of 1 ton live weight gain, rubles	1,098	1,187	1,157	1,153
Cost of fixed production funds earmarked for agriculture per ton of sold pork, rubles	2,714	2,918	3,087	2,906
Full cost of 1 ton sold pork, rubles	1,113	1,285	1,235	1,224

zones with a higher level of procurement prices with regard to decreasing the cost of production and economizing on material-monetary resources because enterprises receive unjustifiably high profits even as it is.

The existing zonal differentiation in procurement prices also results in unjustifiable differences in material stimulation of workers in complexes. Thus, in the Hog Raising Complex imeni 50-Letiya SSSR of Gorkiy Oblast, located in a zone with higher procurement prices, in 1981-1982 bonuses paid out from the fund of material stimulation per ruble of wages were higher by a factor of 1.5 than in Industrial'nyy Complex of Krasnodar Kray, which sells its products at comparatively lower prices.

The inexpediency of extending existing zonal differentiation in procurement prices to large state hog-raising complexes can be illustrated by comparative data on the effectiveness of hog raising in three complexes located in price zones with varying degrees of favorability (Table 2).

As we see from the table, the Industrial'nyy achieved a higher level of intensiveness in the use of the hog herd (animal productivity, return on feed, indicators for reproduction in the herd and so forth) and production costs; the cost of products sold do not surpass these indicators for the other two complexes. Nevertheless, because products were sold at lower procurement prices, in 1982 this enterprise received profits that were smaller by a factor of 2-4 per ton of pork sold than in other complexes located in more favorable

Table 2
Comparative Production-Economic Indicators for the
Production and Sale of Pork in Individual Complexes in 1982

	Hog-Raising Complexes		
	Industrial'nyy, Krasnodar Kray	Kuznetsovskiy, Moscow Oblast	imeni 50- Letiya SSSR, Gorkiy Oblast
Average daily weight gain of live hogs being raised and fattened, grams	672	644	638
Feed expenditure per quintal weight gain in live hogs, feed units	420	510	430
Direct labor expenditures per quintal live weight gain, man-hours	2.30	2.90	2.40
Pork sold to state calculated on basis of 1 entry head, kg	168	161	160
Cost of 1 ton of live weight gain, rubles	847	927	887
Paid per ton of pork sold to the state, rubles	1,147	1,481	1,926
Profits per ton, rubles	237	507	1,028
Profitability level, %	26.0	52.0	114.5
Total profits, thousands of rubles	3,251	6,223	29,242

price zones. Differences in profitability between complexes equalled 26 points in one case and about 80 in the other.

The above analysis of the distribution and use of obtained balance profits in complexes of different zones enabled us to also reveal contradictions in the existing zonal differentiation of procurement prices and needs of expanded development of complexes of this type. Most of the total profits in complexes--from half to one third--are concentrated in a reserve fund and so-called free balance of profits are not resources which can be withdrawn and put into centralized funds of higher organizations. A relative equalization in securing complexes with monetary resources occurs. This again confirms the fact that that portion of profits which complexes receive from inflated procurement prices is practically not needed for the normal management of industrial-type production.

Thus, under conditions in which industrial production technology will be introduced the existing system of procurement prices is in need of basic restructuring. In our opinion, it is essential to move toward procurement prices for complexes that are uniform throughout the country.

Objective grounds for establishing uniform procurement prices for products from complexes with typical industrial production technology, as we saw above, stem from technological, organizational and economic characteristics of complexes as a type of agricultural enterprise.

We have examined the question of the possibility of establishing uniform procurement prices for products from large state hog-raising complexes with a capacity to raise and fatten 54,000 hogs annually. In early 1983 there were 60 such complexes in the country. They were built on the basis of the same or similar designs and in contrast to hog-raising complexes of other types and sizes they are centrally supplied with industrially-produced concentrated feeds taken from state resources. The normal period for assimilating plan capacities is basically over in them. Only in some complexes is a second stage being built or is production assimilation incomplete.

As studies have shown, at the given stage of agricultural industrialization and in the near future it is premature to discuss the equalization of procurement prices for small kolkhoz, inter-kolkhoz and sovkhoz hog-raising complexes (for 12,000 to 24,000 head) as well as for complexes operating within other branches of livestock raising--cattle raising and dairy farming. This is tied to less production stability in these complexes stemming from a greater relationship between production and land, from a greater lack of coordination in indicators and an absence of essential differences in work results as compared to regular kolkhozes and sovkhozes which carry out production under traditional conditions, and from their small proportion in the total volume of commodity production within livestock raising (no more than 6-8 percent in production and procurement in the public sector of production).

In developing uniform procurement prices for products from large state hog-raising complexes it is essential to proceed from the fact that these enterprises, built according to standard designs using state capital investments, must implement production within the limits of planned volumes. In connection with this, they do not need resources for reproduction on an expanded scale, and they need profits mainly as a source to cover needs for resources to develop, according to existing norms, funds of material stimulation and special funds as well as to make budget payments.

In developing uniform procurement prices for the aforementioned sum total of state hog-raising complexes various methodological approaches are possible with regard to the development of two basic components of price--normative costs and normative profits. The average plan cost of a unit of pork sold, in its capacity as full normative costs, can be utilized as a scientifically-based foundation for calculating a uniform procurement price since it is built on the basis of the planned level of production costs and at the same time it takes into account the actual budget costs of building (including total amortization deductions and ongoing repairs) as well as existing prices for mixed feed and other types of material resources and services. The average full plan cost of a unit of production in complexes ensures a sufficiently-high validity for procurement prices formed on its basis. However, for use with the goal of price formation the plan cost of products sold in state complexes must be introduced in statistical accounts. Since at the present time such information does not exist in ready form, the average of the actual cost of

products sold within this group of complexes may be suitable for use in practical terms. The use of an indicator for the average actual full cost of products in forming uniform procurement prices will enable us to avoid a negative result of price design on the basis of normative elements such as the loss of massive profits for the branch of agriculture, which may equal from 25 to 70 percent of total profits in the sum total of complexes being discussed.

We also examined a variant in which the basis for procurement prices was the average actual cost of the standard complex which has fully assimilated planned capacities and which has reached planned technological and organizational-economic parameters. Nevertheless, the average actual cost in most complexes is 15-20 percent higher than in standard complexes and for this reason the procurement price that is built on the basis of standard costs will turn out to be unsuitable. It also will not secure the preservation of profits within the branch.

In validating the other important component of uniform prices--profits--we should consider that, as we have already noted above, they are necessary only for the formation of funds of material stimulation and special funds as well as for budget payments. Corresponding to this condition will be the procurement price, the level of which secures profitability norms that are no greater than 6-8 percent of full normative costs and no greater than 3-5 percent of the normative cost of fixed production funds and set-rate turnover capital. On the other hand, the necessity to keep departmental interests in mind requires the preservation of the middle level of existing procurement prices as well as of mass profits received at the present time by the given group of complexes.

Because of these considerations a variant of the procurement price, built on average actual indicators of full costs for products sold by state hog-raising complexes and on profitability levels, may be adopted. In this case, surplus resources which develop in complexes can be directed into the free profit balance and through it into the centralized funds of ministries for subsequent redistribution at the discretion of the department.

With the goal of preserving the average level of procurement prices as well as of partially compensating state expenditures for building such complexes, the planning of uniform procurement prices can also include a higher norm for deductions into funds of economic stimulation and into budget payments as compared to regular agricultural enterprises on a level near that for branches of industry.

The proposal concerning establishing special nationally-uniform procurement prices for the products of large state hog-raising complexes is based on the fact that the setting apart of economic relations must correspond to organizational and technical setting-apart of complexes. The introduction of uniform procurement prices for this category of agricultural enterprises, with a consideration of recommended methodological approaches, will enable us to eliminate developing differences in profitability among complexes and to equalize economic production conditions in them.

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AGRO-ECONOMICS AND ORGANIZATION

PURCHASE PRICE MARKUPS IN UNPROFITABLE ENTERPRISES REVIEWED

Kiev EKONOMIKA SOVETSKOY UKRAINY in Russian No 6, Jun 84 pp 10-16

[Article by I. Moskovko, director of the agricultural section of UkrSSR Gos-komtsen [State Committee on Pricing] and V. Protasov, director of the section on the procurement and sale of agricultural products of UNIIEOSKh [Ukrainian Scientific Research Institute on the Economics of Agriculture]: "The Role of Supplements to Procurement Prices for Products Sold by Low-Profit and Unprofitable Agricultural Enterprises"]

[Text] In order to successfully fulfill the goals of the Food Program a series of measures is being implemented to strengthen the economy of agricultural enterprises, to develop their material-technical base, to improve economic relations between agriculture and other branches of the APK [Agro-Industrial Complex] and to increase the material interest of kolkhozes in end results. Among these measures an improvement in the price mechanism is required in order to bring it into accordance with the contemporary level of publicly-essential expenditures for agricultural production output. Shortcomings existing within the system for wholesale factory prices for the means of production and procurement prices for agricultural products to a significant degree became one of the reasons that in 1980 half the agricultural enterprises in the country were unprofitable,¹ and that in a significant portion of them the existing profitability did not enable enterprises to manage production on a cost accounting basis. This is why there was a systematic increase in kolkhoz and sovkhoz debts to Gosbank.

In 1983 16 billion rubles were directed at improving procurement prices. The resources of the Ukrainian SSR earmarked for this purpose exceeded clear profits obtained by kolkhozes and inter-farm enterprises in the republic in 1981-1982 by a factor of 1.9. Moreover, in order to regulate accounts for production resources acquired by kolkhozes and sovkhozes, as of 1 January 1983 there was a cancellation of a previously effective order for making payments to them from the budget to make up the difference between old and new prices for some types of industrial goods utilized for production needs (building

¹ See: Garbuzov, V. F. "The Party's Food Program and the Goals of Financial Organs." FINANSY SSSR, No 7, 1982, p 6.

materials, spare parts, oil and so forth). Compensation totals are included in the total mass of resources earmarked for improving the system of procurement prices.

The resources that have been earmarked for improving the price mechanism can be divided into two parts. One of them, together with compensation totals, is utilized to raise purchase prices, to improve zonal differentiation and to more validly consider the quality of products sold to the state; the other--to establish markups to purchase prices for products produced under the poorer conditions of low-profit and unprofitable enterprises.

State purchase prices for 46 types of products have been reviewed. On the average in the republic as of 1 January 1983 they have been raised by 16.9 percent: for grain--by 14 percent, sugar beets--21 percent, sunflowers--31 percent, potatoes--22 percent, long-fiber flax--19 percent, milk--23 percent, cattle--10 percent, hogs--8 percent, sheep and goats--5 percent and wool--12 percent.

In reviewing purchase prices for grain products most sums were directed at raising the material interest of enterprises in increasing the production and sale to the state of forage grain and groats crops. For a long time plans for the state procurement of these products were not fulfilled, which had a negative effect on the quality of mixed feed produced from state resources and on meeting the needs of the population for groats. Depending on the price zone, purchase prices for oats were raised by 22-40 percent, for feed barley--by 21-33 percent, for millet--by 31-37 percent, for corn--by 33 percent and for buckwheat--by 21 percent. Purchase prices for those types of potatoes which are used as food were raised an average of 21.7 percent and for potatoes of highly valuable table varieties an additional supplement of 20 rubles per ton is given.

In addition to increasing the price for long-fiber flax a system of markups has been introduced for the sale of high-quality products during the year of cultivation. Thus, there is a 50 percent markup of the purchase price for number 12 fiber and above that is sold in September and October and a 10 percent markup for sales in November and December; after 31 December the payment of supplements is stopped. A corresponding scale of markups according to time of sale has been confirmed for the sale of number 1.25 and above flax stock and straw. This will facilitate the curtailment of the period needed for primary processing and sales of flax products and a significant drop in losses during the storage of flax in enterprises.

In the process of improving the system of purchase prices considerable attention was focused on improving their zonal differentiation on the basis of a more precise consideration of regional differences in conditions for reproduction of products. Thus, according to the old price list high purchase prices for sugar beets were established for zone 3, which included the enterprises of Volyn Oblast. At the present time this zone also includes the enterprises of Zhitomir, Ivano-Frankovsk, Lvov and Rovno oblasts, in which conditions for raising beets are approximately the same as those in Volyn Oblast. The enterprises of Poltava, Kharkov and Chernovitsy oblasts were transferred from zone 2 to 1; of Kirovograd and Khmelnitskiy oblasts--from zone 1 to zone 2.

Research by scientific institutions and the accumulated experience of plan price formation have enabled us to come to the conclusion that under republic conditions with zonal differentiation of purchase prices, the administrative rayon should be the zone-formation unit. Within the limits of the rayon to equalize reproduction conditions it is expedient to utilize factors such as scientifically-based specialization with a consideration of the specific conditions in the enterprise, planning and material-technical supplies, the redistribution of income through centralized funds, the strengthening of economically-lagging enterprises by means of cadres, and so forth. The creation of rayon agro-industrial associations provides objective organizational-economic prerequisites for the effective use of these keys to the planning-economic regulation of agricultural production. This is why in examining purchase prices for cattle, sheep and goats their differentiation up to village soviets, which existed in a number of rayons in the republic, was eliminated. The enterprises of every rayon now belong to the same price zone for the given types of products. It should be noted that the improvement of zonal price differentiation was implemented without decreasing previously-existing levels. Prices have been increased for all enterprises, but to different degrees according to specific conditions. Thus, the greatest gains from increased purchase prices for cattle were achieved by enterprises of woodlands regions, where beef production plays a leading role in the economics of agricultural production.

At the present time differentiation in purchase prices with regard to village soviets exists only for grain crops. Resources allocated to the republic to increase grain prices do not yet allow for a transition to zoning according to rayons.

The second portion of resources allocated with the goal of improving the price mechanism is utilized to pay out markups of purchase prices for products produced in the worse natural-economic conditions of unprofitable or low-profit enterprises. The development of this type of special purpose fund is based on the fact that with a general price increase the greatest advantage is achieved by enterprises, rayons and entire oblasts having a high level of production development. Thus, in the steppe zone the agricultural enterprises of Donetsk and Dnepropetrovsk oblasts increased their profitability by 7 and 9 points respectively just by selling products according to the new prices, whereas Nikolayev Oblast, located in the same natural-economic zone but having a lower level of production output, increased its profitability by only 4 points. Thanks to a greater degree of intensiveness, enterprises with a high production level due to increased prices receive more supplementary resources per unit of land area. Consequently, they have greater possibilities for increasing the pace of expanded production output in the new cycle. In the final analysis, this results in a strengthening of differentiation among agricultural enterprises according to level of development.

This is why, according to a decision at the May 1982 Plenum of the CPSU Central Committee, an entire system of important measures is being implemented to develop the economies of unprofitable and low-profit kolkhozes and sovkhozes. Kolkhozes with insufficient resources of their own receive financial aid from the budget for the building of housing, children's preschool facilities, clubs,

and inter-enterprise roads, for making insurance payments and for reimbursing expenditures related to meeting the social and cultural needs of their kolkhoz farmers. With this goal, the republic has been allocated 725 million rubles, which have been distributed among 4,858 kolkhozes, averaging 149,000 rubles per enterprise. In order to improve the financial status of unprofitable and low-profit enterprises significant debts have been written off by Gosbank and the repayment of notes that will come due during this period has been delayed 10 years.

Financial aid measures are of great social and economic importance, but they are not self-supporting measures since they are not tied directly to production output and since they do not act as a material stimulus for increasing it.

In contrast to this, purchase price markups for products produced in the worst conditions by unprofitable and low-profit kolkhozes and sovkhozes materially stimulate a growth in production and sales to the state. In connection with this a question arises concerning their economic essence and role in the development of agricultural production.

In our opinion, purchase price markups for products produced under the worst conditions by unprofitable and low-profit enterprises are an integral part of the plan price mechanism. They fulfill the function of materially stimulating production and redistributing differential rent incomes of the first and second orders.

The republic was allocated 947 million rubles for the payment of markups. In distributing them to oblasts a consideration was made of the economic status on the average for 1979-1981 of enterprises according to groups with various profitability levels, of changes in their income related to increased procurement prices for agricultural products and of wholesale factory prices for several types of industrial goods acquired by kolkhozes and sovkhozes. After this a determination was made of resources needed by every oblast to cover the losses of groups of unprofitable enterprises and to provide them with an average republic profitability norm with markups on a level of 12 percent. This type of approach in redistributing markups secured an equalization of profitability according to natural-economic zones in the republic, and within them--by oblasts.

Within oblasts allocated sums were distributed in accordance with specially-prepared instructive documents which established the group of enterprises having the right to receive markups, a system for allocation, payment and use and an order for developing and confirming lists to receive markups.²

² See: USSR Ministry of Finances, USSR Ministry of Agriculture and USSR Ministry of the Fruit and Vegetable Industry. "Instructions on the Order for Determining, Paying and Accounting for Purchase Price Markups for Agricultural Products Sold to the State by Unprofitable and Low-Profit Kolkhozes and Sovkhozes." Moscow, 1982; UkrSSR Ministry of Agriculture and Ukrainian NIIEOSKh imeni A. G. Shlikhter. "Instructions on the Order for Developing Forms to Calculate Purchase Price Markups for Products Sold to the State by Unprofitable and Low-Profit Enterprises", Kiev, 1983.

Purchase price markups were introduced for the period 1983-1985 for agricultural products produced under the worst conditions by low-profit or unprofitable enterprises. Payments are made according to lists that remain stable for the entire aforementioned period and that have been confirmed by the oblast executive committees of soviets of people's deputies representing soviets of rayon and oblast agro-industrial associations. The stability of the lists is one of the important principles for paying out markups, providing these enterprises with a dependable source for obtaining supplementary income for the development of a material-technical base, for gathering strength with cadres and for raising the organizational-economic level of production. Moreover, the principle of stability serves as a barrier to lengthening lists with the names of enterprises, the directors of which substitute endless searches for sources of all types of bonuses for daily work to control the economy of production.

The markup lists include all agricultural enterprises, regardless of departmental subordination, which had an expected (with a consideration of price changes as of 1 January 1983) total profitability below the average oblast estimated profitability norms for this category of enterprises. It was on this basis that the markups allocated to the oblast were distributed among enterprises.

Republics were given the right to distribute markups within the oblast, kray or autonomous republic in a differentiated manner according to groups of enterprises or individually by enterprises. According to the first variant, all enterprises banded into groups with an interval of 5 percent depending on the expected level of profitability (losses). In each group a determination was made of the necessary markup sums to cover losses and secure the average oblast profitability norm, and then these sums were distributed according to the volume of products sold to the state per 1982 plan volumes. In the second variant these questions were dealt with separately in each enterprise.

Studies have shown that it is easier to calculate group markups. However, they do have a number of shortcomings in comparison to individual markups. Enterprises with different specializations unite into a single group, but markups that are established are the same according to types of products; for this reason, with their help the main goal is not achieved--to stimulate the leading branches of the enterprise. Within the limits of the group there is no equalization of expected profitability in enterprises with the use of markups. Some enterprises receive excess markup sums while others do not receive enough of a markup. For this reason, on the basis of research done in the enterprises of Kiev Oblast it was recognized as necessary to utilize the individual variant for distributing markups to enterprises in the republic.

Total markups for unprofitable enterprises were calculated according to the following formula:

$$H_y = \frac{C_y + P_u}{100} + Y_p + Y_n. \quad (1)$$

where H_y --the allocated markup sums for the unprofitable enterprise; C_y -- total cost of commodity production and services of the unprofitable enterprise, corrected for changes in wholesale factory prices for some types of industrial

articles; P_n --calculated norm of sum total profitability of unprofitable and low-profit enterprises in the oblast; Y_p --expected total losses with a consideration of changes in prices and costs; Y_n --markdown of livestock and production reserves in unprofitable sovkhozes according to the 1982 plan.

Total markups in low-profit enterprises were determined according to the following formula:

$$H_p = \frac{C_p + P_n}{100} - \Pi_p + Y_n, \quad (2)$$

where H_p --allocated sum of markups for the low-profit enterprise; C_p --total cost of commodity production and services of the low-profit enterprise in 1979-1981, corrected for changes in wholesale factory prices for some types of industrial goods; P_n --calculated norm of total profitability in unprofitable and low-profit enterprises in the oblast; Π_p --expected total profits with a consideration of changes in prices and cost; Y_n --markdown of livestock and production reserves in low-profit sovkhozes according to the 1982 plan.

The markup sums calculated according to these formulas were distributed according to types of products, which determine the specialization of the enterprise. First, expected profitability was established in each with a consideration of changes in purchase and wholesale factory prices for some types of industrial goods earmarked for production purposes. Then in these branches a profitability norm was determined with a consideration of total markups for types of products allocated to the enterprise. The relationship of these sums to earnings, with a consideration of quality for each type of product, provided the percent of the markups, which together with the total sum for the enterprise, was confirmed by oblast executive committees. It has been determined that markups cannot exceed 75 percent of purchase prices.

In some oblasts with clearly expressed differences in natural-economic conditions, an oblast profitability norm has been differentiated in order to distribute markups according to zones. Thus, in Kiev Oblast for the enterprises of the forest-steppe zone a norm of 10 percent was established; for the woodland region--16 percent. Within these zones each enterprise was allocated markups which secured these norms according to calculations.

The question of distributing markups was dealt with somewhat differently in the Lithuanian SSR. Until 1 January 1983 purchase prices here were differentiated according to groups of enterprises, and the basis for groupings was a comprehensive evaluation of resources. Beginning in 1983, the differentiation of purchase prices was eliminated and to replace it there was an introduction of differentiated purchase price markups for the products of enterprises, located in different natural-economic conditions, according to groups.

³The existing practice of marking down transitional reserves and young livestock to the level of purchase prices decreases the cost of production and increases the results of its sales; this is why it is planned to reimburse low-profit and unprofitable sovkhozes for these sums by means of purchase price markups.

The results of the economic activities of agricultural enterprises in the Ukraine for 1983 attest to the fact that markups for products sold to the state by low-profit and unprofitable enterprises had a positive effect on strengthening their economies, on raising the pace of production development and on the inter-zone, intra-zone and inter-branch equalization of profitability of agricultural production. In 1 year 4,574 enterprises received markups totalling 877 million rubles, or an average of 192,000 rubles per enterprise. As a result of this, the average republic level of profitability in kolkhozes, sovkhozes and other state enterprises increased by 4.1 points, including in the enterprises of steppe oblasts--by 3.1 points, of forest-steppe oblasts--by 4.2 points and of woodland oblasts, located in the more unfavorable natural conditions--by 6.4 points. Profitability between oblasts within zones is being equalized even more substantially as a result of the markups. Thus, the difference in profitability between Zhitomir and Chernigov oblasts equalled 12.4 points in 1983 without markups, and only 3.5 points with markups.

This data attests to the general influence of markups on the economies of kolkhozes and sovkhozes in the republic. Also of great interest is the comparison of economic indicators for enterprises which do and do not receive markups. Whereas in 1982 enterprises that were included on the list to receive markups were as a whole unprofitable in the republic (minus 5-6 percent), they completed 1983 with profits of 1.434 million rubles and a profitability of 17.3 percent. Thus, the return on expenditures in these enterprises increased by 22.9 points. In enterprises which did not receive markups the return on investments increased by 9 points and their average productivity level equals 25.3 percent. Consequently, the difference in the levels of profitability between these groups of enterprises was greatly reduced.

In the group of previously low-profit and unprofitable enterprises gross production increased by 6 percent in 1983 as compared to 1982; in the others--by 0.3 percent. Labor productivity increased by 4.6 and 1.7 percent respectively. The growth of production output enabled us to increase production volume, which was one of the main reasons for an increase by a factor of 1.8 of payments to previously low-profit and unprofitable enterprises of 50 percent purchase price markups for products sold to the state above the levels reached during the 10th Five-Year Plan.

Increasing purchase prices and paying out markups, together with other measures of a socio-economic nature implemented in economically-lagging enterprises, encouraged the improvement of labor activeness of their workers. The average annual number of kolkhoz farmers and sovkhoz workers involved in agricultural production in these enterprises increased by 1.3 percent. Thus, the more rapid pace of labor productivity and production output reduces the differences that developed in the past in the levels of economic development of enterprises in the groups under examination.

Markups obtained by low-profit and unprofitable enterprises are important for the inter-branch equalization of production effectiveness. Calculations show that even after the purchase price increases in 1983 the income of livestock raising in the republic's kolkhozes and sovkhozes will remain comparatively low, especially in the group of low-profit and unprofitable enterprises. This

is why it is no accident that of the sum total of markups received, 778 million rubles, or 89 percent, was directed into livestock raising, including 313 million rubles for dairy farming, 367 million rubles for cattle and 72 million rubles for hogs. In crop farming, of 99 million rubles 39 million were obtained for beets, 25 million rubles--for vegetables and 19 million rubles--for potatoes. By means of markups the profitability of dairy farming increased by an average of 7.5 points in the republic, of cattle production--by 8.1 points and of hog raising--by 6.8 points; the profitability of crop farming within this same range increased as a result of markups in vegetable farming and potato farming only (by 4.7 and 5.2 points), where its level was low until recently. In grain production as a result of markups profitability increased by 1 point, in beet farming--by 2.5 points and in sunflower production--by only 0.4 points.

Purchase price markups for low-profit and unprofitable enterprises are paid out to procurers simultaneously with the calculation of delivered products. If enterprises sell products directly within the trade network, to sanatoriums or to children's facilities according to retail prices, which are lower than purchase prices, with reimbursement of the difference between the purchase and retail price according to the established order, markups are paid out in terms of the percentage of the purchase price by Gosbank institutions.

The situation involving the norm for paying out markups for products sold by inter-enterprise enterprises needs to be defined more exactly. The instructions establish that for products sold by an inter-farm enterprise or by a kolkhoz or sovkhoz fulfilling the function of the latter, on the strength of fulfilling the plan of low-profit and unprofitable enterprises-participants, markups are paid out by the purchaser directly to the low-profit (unprofitable) enterprise in accordance with the register-interpretation presented to the purchaser by the inter-farm enterprise. If each batch of products sold by the inter-farm enterprise is approximately the same in terms of quality, then this type of system for paying markups justifies itself. However, with the delivery of batches that differ in quality, enterprises are placed on an unequal footing for markups are calculated on the basis of the purchase price with a consideration of product quality. Enterprises for which better quality products will be sold according to the register-interpretation, especially if this involves large-weight young livestock, will have the advantage in terms of the total calculated markups.

The existing system for distributing and paying markups has been established for 3 years and is, to a certain degree, experimental in nature. In our opinion, in the future the role of markups as a key to equalizing economic conditions for reproduction within price zones must become even stronger. One of the variants for using these resources can involve dividing them into two parts--a fund for the intra-zone equalization of reproduction conditions and a fund for supplementary material stimulation of increased production output in enterprises that are unprofitable for organizational-economic reasons.

The first fund should be utilized by enterprises in which land has been evaluated as being below the zone average and which are supplied less than average with production funds.

The second fund, comparatively smaller, should be used by enterprises whose resource potential is not below the average level but which on the average for 3 years have been low-profit or unprofitable enterprises for organizational reasons. Such enterprises can receive markups for a strictly limited time in order to eliminate the organizational-economic reasons for their lags during this period.

The contemporary level of purchase prices with markups, under conditions in which there is an efficient use of existing resources by enterprises and in which there is a decrease in the cost of production, will provide every normally-functioning enterprise with the opportunity to fulfill production plans and to sell products on a cost-accounting basis.

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CAPITAL INVESTMENT UTILIZATION IN LIVESTOCK COMPLEXES EXAMINED

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[Article by V. Titov, candidate of economic sciences and section director of TsNIIEPsel'stroy [Central Scientific Research Institute of Experimental Planning in Agricultural Building], followed by a commentary on the article by L. Kharkhardin, director of the Administration of Consultants on Designs and Estimates of the USSR Ministry of Agriculture: "Raising the Quality of Planning of Livestock Raising Objects"]

[Text] The efficient utilization of significant capital investments being directed today at the building of livestock-raising complexes and farms depends not only on the degree to which there is a basis for the distribution of resources according to types of production but also to a large extent on the quality and progressiveness of the design decisions that are made. Increased effectiveness in the planning of agricultural and especially of livestock-raising objects was facilitated by the resolution of the CPSU Central Committee and the USSR Council of Ministers (1981) entitled, "On Measures to Further Improve Planning-Estimate Work," which significantly strengthened the responsibility of planning organizations for the quality of the documentation being elaborated. The resolution of the CPSU Central Committee and the USSR Council of Ministers passed in May 1984 and entitled, "On Improving Planning, Organization and Management of Capital Building," also foresees a number of measures directed at improving the quality of planning and at improving the validity of building.

Improvements in plans for livestock-raising objects are related first and foremost to the pre-planning stage, during which prognoses and schemes for developing and distributing branches of agriculture are elaborated. They establish the goals and basic indicators for livestock raising for the future in a cross-section of economic regions and union republics. Measures are foreseen with regard to the comprehensive utilization of natural resources. The bases for the expediency of planning, building new, renovating, technically reequipping or expanding existing livestock-raising complexes (including questions of supplying these with feed) are provided. The reference volumes of capital expenditures are calculated, and so forth.

The scheme for distributing livestock-raising complexes and enterprises must be based on general conditions which satisfy all branches of livestock

raising, including: obtaining the planned volume of livestock products with minimal total expenditures for production, shipment and capital investment; a consideration of the interests of developing agricultural production, its distribution, specialization and concentration; a maximal increase in the output of products in specialized enterprises under the condition that the building of new complexes will not be accompanied by the premature curtailment of production on existing farms; coordination of the branches of livestock raising and farming, the distribution of large livestock-raising complexes with conjugate APK [Agro-Industrial Complex] enterprises (plants for processing milk, meat combines, mixed feed and sugar plants, feed shops and others); the development of a feed base for securing the production of all types of products using the enterprise's own resources (with the exception of state complexes created according to decisions by the USSR Council of Ministers).

In order to establish the economic expediency of building livestock-raising complexes and specialized enterprises it is essential to develop technological maps and to consider the number of service personnel and the wage fund, expenditures for feed, amortization deductions, joint production expenses, the cost of a unit of production, the level of profitability and the time needed to compensate for fixed capital. At the present time fixed technical-economic indicators for objects are elaborated within schemes for the development and distribution of the branch, which excludes the working out of technical-economic validity. In our opinion, this type of order does not encourage an improvement in the quality of planning.

We know that the main role at the pre-planning stage belongs to the consumer. As practice shows, clients do not always fulfill their functions, which makes the work of planning organizations more difficult. Thus, for example, in accordance with instructions on the content, order of elaboration and coordination of plans and estimates for the building of enterprises, buildings and structures (SN-202-81), the plan must include an approximation of the volume of capital investments and basic technical-economic indicators for the planned enterprise. However, due to the absence of sufficient elaborations, the cost limit for building, which is established by the client in planning, is often exceeded when the technical work plan is drawn up. In such cases planners are deprived of bonuses. In order to avoid this, the limits indicated in planning assignments are sometimes put together according to the estimated building costs that are established later. This type of situation does not facilitate the efficient use of resources or a decrease in the cost of production. In our opinion, it is essential to be more demanding with regard to the fulfillment of instructions.

There are serious shortcomings in the organization of planning itself. It still does not sufficiently encourage the achievement of the three main factors assuring the effectiveness of capital building--to build quickly, economically and on a modern technical level.

The goal of decreasing building costs became particularly urgent in connection with the recent constant increase in the cost of a unit of production capacity (see table).

Dynamics of Norms for Standard Capital Investments
in the Building of Livestock-Raising Complexes in 1976-1985,
in percent as compared to 1971-1975

	1976-1980	1981-1985
Complexes producing:		
Milk	112	128
Beef	115	122
Pork	112	135

Included among the general reasons for increased building costs regardless of the type and size of the object being built are the following: increase in wholesale prices for materials, machines and equipment, an increase in the norm for overhead expenses in connection with the transition to a contractual method of building, and a growth in wages within the building industry. According to our calculations, with the transition from the estimated costs of 1955 to those of 1969 the increase in the cost of objects being built in dairy farming increased by about 30-35 percent. But the main reason for the increase in cost was based on the industrialization of building work, on an increase in the technical level of objects being built, on meeting contemporary technological demands as regards the maintenance of livestock, on the necessity of improving working conditions for livestock farmers and on the growth of expenditures for the preservation of the environment.

The dynamics of actual building costs also attest to their constant growth. For example, an analysis of planning-estimate documentation for building milk-producing complexes for 800 cows showed that in 1974-1982 unit capital investments grew in the RSFSR on the average from 2,076 rubles to 3,340 rubles per livestock place, or by a factor of over 1.6.

In connection with this the norms for unit capital investments for building farms and complexes to maintain cattle and hogs during the 10th Five-Year Plan turned out to be depressed in comparison with the actual budgetary costs that developed. Thus, the norms for unit capital investments into the building of dairy complexes for 800 cows were confirmed for the RSFSR as equalling 1,777 rubles per livestock place, whereas actual expenditures during the second half of the 10th Five-Year Plan turned out to be 65 percent greater. This is confirmed by official statistical reports. According to data from form number 2-ks (sovkhоз), in 1977 on the average for the country the actual cost of putting dairy complexes for 800 cows into operation equalled 1,910 rubles per livestock place and of raising and fattening hogs--395 rubles per livestock place, which exceeded norms by 11 and 24 percent respectively.

It is important to note that the real level of unit expenditures foreseen by model decisions was significantly higher than account data. An analysis attests to the exclusion from estimates of a number of important objects earmarked for subsidiary-auxiliary purposes, the budgetary costs of which equal 20-30 percent of total expenditures.

The main factors which cause actual levels of expenditures to surpass norms are changes and corrections in planning decisions that have been approved, a decrease in the degree of production concentration and a more precise consideration of specific conditions in surveying objects.

Norms for unit capital investments for building dairy complexes for 800 and 1,200 cows during the 10th Five-Year Plan were elaborated primarily on the basis of model plan number 801-315. However, practical experience has demonstrated the necessity of making certain changes in planning decisions and of increasing, in connection with this, expenditures for the building of objects earmarked for subsidiary-auxiliary purposes to prepare and store feeds, distribute and store manure, and so forth. As a result, the actual cost of these objects increased by 34-35 percent as compared to the norm, and the estimated costs of a complex in its entirety, with all other conditions being equal, increased by 16-24 percent.

Significant changes have been made in the planning decisions for hog-raising complexes. Thus, model plan number 802-147/72 on complexes to raise and fatten 24,000 hogs annually was subject to reworking with the goal of eliminating planning, building and technological shortcomings that were discovered during state testing. A reproduction section for the production of replacement pigs was added. Hog-raising complexes for 54,000 and 108,000 head were also supplemented with a number of objects (artificial insemination stations, technical service points, etc.), and in some cases the cost of building pedigree reproductive farms was included in expenditures.

The increase of actual expenditures over norm was the result of the lack of correspondence between the actual and planned structure of capacities in complexes. Thus, norms foresaw a much larger proportion of large objects with a relatively smaller capital intensiveness than occurred in reality.

It should also be noted that norms did not consider expenditures for building non-platform supply lines and structures, the cost of which reaches 17 percent and more of actual expenditures.

The increase in building costs for livestock-raising complexes and farms which is based on factors such as scientific-technical progress, the preservation of the environment and so forth is basically a natural phenomenon reflecting real processes. However, at the present time there are many invalid reasons for increases in the cost of a unit of production capacity of objects stemming from errors and miscalculations that have been tolerated during the planning and distribution of complexes as well as from excesses and the inefficient utilization of resources. Planning experience demonstrates that reserves for decreasing unit costs by eliminating these shortcomings are very significant.

One of the typical planning errors made is the incorrect selection of a building site. For example, Lengrazhdanprojekt [Leningrad Citizens' Planning Design Institute], in planning a dairy complex for the Kirishskiy Sovkhoz, did not pay sufficient attention to the selection of a building site. As a result, the production platforms of buildings were utilized inefficiently, which in the final analysis led to an increase in costs for the building of the object totalling about 400,000 rubles.

The planner and client do not always strive to maximally utilize existing capacities. For example, in the technical draft for expanding the Pionerskaya Poultry Factory from 172,000 to 415,000 hens, which was elaborated by Vostok-giprosel'khozstroy [Eastern region state institute for planning of industrial buildings and structures for agriculture], instead of planning for reequipping existing buildings and structures with the use of modern multi-tiered cage batteries for housing hens, a large volume of new building was called for. As a result of the elimination of these shortcomings the estimated cost for expanding the poultry factory can be decreased by 6.5 million rubles.

In planning dairy complexes an important factor in decreasing building costs is increasing the compactness of the structure. According to data from Gipronisel'khoz [All-Union Planning and Scientific Research Institute for the Planning of Standard and Experimental Agricultural Production Centers and Establishments for Storing and Processing Grain], the cost of one livestock place for farms with 1,600 cows changes according to the level of interlocking of buildings from 1,600 to 1,300 rubles. A decrease in area and its efficient zoning result in a significant decrease in unit investments. As a rule, the operations qualities of the complex improve in this case. An analysis showed that objects such as a decontamination center and a veterinary isolation center loose their function and are practically not used at all, especially during the winter, if they are improperly located in relationship to the main production building.

Unit building costs can be significantly decreased by organizing the composition of complexes according to objects, that is, by eliminating from title records all buildings and structures which are not directly related to production technology and services. Let us demonstrate this using as an example the work of two planning institutes. The draft for a dairy complex for 424 cows elaborated in Latkolkhozproyekt [Latvian Kolkhoz Planning Institute] is much more economical as compared to a similar complex developed by planners of Latgiprosel'stroy [Latvian state institute for planning of industrial buildings and structures for agriculture]. The fact is that the former institute is involved in planning for kolkhozes and the latter--for sovkhozes. In the practice of planning capital investments over a period of a number of years it was an accepted arrangement that for the building of livestock-raising complexes costing 1 million rubles or more in sovkhozes budgetary resources were utilized. This encouraged directors of enterprises not to decrease, but on the contrary to increase estimated building costs. This is why drafts included objects that were not directly related to the complex. For example, in the Valdnal Sovkhoz estimates for the complex included the building of water lines for providing water to animals in pastures costing 50,000 rubles; in the Shkibe Sovkhoz estimates included various subsidiary structures costing 64,000 rubles.

Frequently drafts included the building of engineering lines which will satisfy the needs not only of the complex but of other consumers as well. Thus, in Rutsava Sovkhoz the cost of a planned approach road equalled 63,000 rubles, whereas in Taysma Sovkhoz it equalled 44,000 rubles. Moreover, the instructions state that the estimated cost for building an object which is earmarked for serving not only the given object but other needs as well, must

be determined according to a separate estimate table. Latkolkhozproyekt adheres to this rule and for this reason in the plans developed by it we do not find an unjustifiable increase in the cost of a complex resulting from non-site networks and structures.

Technological decisions made in plans affect building costs to a lesser degree but are reflected in the operational qualities of complexes. Thus, in plan number 819-110 for a dairy complex for 424 cows the fulfillment of technological processes is based on morally-outdated equipment which does not yield high economic indicators. At the present time there is discussion about renovating complexes which were built according to this plan.

In most existing plans for dairy farms and complexes technological documentation is poorly developed. The number of service personnel, for example, is determined more according to estimates than on the basis of technological charts and schedules for work completion. In the technological portions of plans there is an absence of a clear division of labor among workers with regard to the fulfillment of basic functions. This is why frequently the same category of workers, as for example artificial inseminators or control assistents, are considered primary workers in some plans and as administrative-zooveterinary personnel in another.

In order to eliminate the aforementioned shortcomings it is expedient to implement the building of 2-3 experimental objects which must pass a test with an evaluation of all technical-economic indicators. Only after this can a plan be recommended for use in mass building as a model plan. Planning organizations must implement constant author's supervision of the course of building and operation of complexes and on this basis they must generalize progressive experience.

The technical-economic portion of a plan, developed with quality, is of great importance in increasing planning effectiveness. It should be noted that at the present time there is an absence of a single methodology for a technical-economic evaluation of planning decisions. This results in a great variation in the given parts of the plan. Each institute has established its own group of indicators to be used for economic analysis, which makes it difficult to compare plans. The introduction of a single system and order will give us the opportunity to significantly improve work on generalizing and systematizing technical-economic indicators for plans that are developed and thereby to raise the level of substantiation of decisions that are made.

In connection with this it is very important to analyze and evaluate planning decisions by comparing technical-economic indicators with similar data from projects-standards or with actual indicators achieved by operating leading enterprises. At the present time this type of work is being carried out by Latgiprosel'stroy. However, the projects-standard is selected according to the principle of "the more expensive" and thus the meaning of this comparison is precluded. For an objective evaluation it is essential first of all to develop a corresponding methodology for comparing economic indicators and to have a data bank. Special attention should be given to comparing indicators on building costs and unit capital investments. It should be noted that

unit capital investments in and of themselves do not yield an understanding about the economic advantages of new objects. Thus, for example, a decrease in building costs as compared to the standard can be achieved by a decline in the operations qualities of complexes, or vice versa, a growth in one-time expenditures is accompanied by a decrease in ongoing expenditures. In connection with this, it would be expedient to make comparisons of building costs according to each item of capital expenditures.

In our opinion, in order to improve the quality of planning livestock-raising complexes it is essential to concentrate all state planning organizations of an agricultural profile within the system of the USSR Ministry of Agriculture. Decisions on the planning and building of complexes must be made only on the basis of schemes which have been developed related to the development and distribution of branches of agricultural production. It is also important to constantly improve general union and zonal catalogues of industrial building designs and products for mass application in rural building.

[Commentary by L. Kharkhardin] The article raises important questions related to improving the planning of livestock and poultry raising objects within the agro-industrial complex. The author correctly emphasizes that an improvement in the quality of planning documentation is directly related to the elaboration of promising schemes for the development of branches of agriculture. The given stage of pre-planning work is now being given considerable attention, especially as concerns the problem of the feed base and providing complexes with highly productive livestock and poultry. As we know, schemes for developing and distributing branches of livestock and poultry raising are now developed stage by stage, beginning with a determination of target indicators in the country as a whole and ending with an elaboration of oblast and rayon schemes for distributing specific objects. Schemes contain materials on the economic expediency of planning and building new enterprises.

In our opinion, decisions regarding the renovation or expansion of existing complexes and farms must be made on the basis of developing technical-economic substantiation (TEO), which must provide computations related to the effectiveness of particular measures as compared with new building.

Using schemes and other materials as a basis a determination of the complex's capacity is made or refined, its location is established, and the client (with the participation of the general planner) prepares a planning assignment, which is then confirmed in the established order. The qualitative level of plan development depends to a large extent on the correct formulation of this document. We can agree with V. Titov that demandingness with regard to planning assignments must be strengthened. There must be an especially-careful working out of questions related to the new technology and progressive experience, to the effectiveness of utilizing capital investments, to a decrease in the materials-intensiveness and labor-intensiveness of building and to the economic use of raw materials, materiel and energy resources.

The article correctly notes the important role of clients in improving the planning process. In relation to this attention should be paid to the collection and transmission to planning organizations of primary data. As

practice has shown, there are still significant shortcomings here. The main one is the inadequate economic analysis of basic information. Frequently clients unconditionally accept the clearly inflated requirements of coordinated organizations in issuing technical conditions for attaching planned objects to engineering networks and structures. Thus, the technical documentation developed by Mosenergo [Moscow Regional Administration of Power System Management] for planning one object stated that it was necessary to move the fuel supply network in the city's micro-region; this network was not related at all to the given building site. The acceptance of these conditions would have resulted in an increase in the estimated building costs and in a deterioration of the structure's technical and economic indicators.

The author justifiably emphasizes that the quality and economy of plans depend greatly on correct solutions with regard to the selection of a site for building complexes or farms. It is true that in a number of cases this question has not been given the necessary attention either by clients or by planning organizations, which results in an unjustified increase in the cost of objects. Thus, the groundlessly-accepted decision about putting the Chernoarmenskaya Poultry Factory for 6 million broilers annually in Gorkiy Oblast on a site with inadequate hydrogeological conditions could have resulted in additional expenditures of over 4 million rubles, or 14 percent of the cost of building. A similar situation existed in the hog-raising complex for 54,000 hogs in Khorezm Oblast of the Uzbek SSR.

Practical experience attests to the fact that in selecting a building site it is essential to count several variant sites for building the complex with a consideration of specific conditions and factors which affect the cost of the structure. The final selection must be based on the variant that presents minimal expenditures for the assimilation of territory. As a rule, objects must be located on land that is unsuitable or of little use in agricultural production.

On the whole the author validly revealed the shortcomings existing at present in the organization of the planning process itself. To this we should add that the quality of this work depends to a considerable degree on the qualifications of the senior engineer and draft architect, on their training and work experience. In connection with this work to improve the skill of planners is important. It is essential also to strengthen the sense of responsibility of technical departments with regard to the quality of documentation produced.

As we know, the planning of livestock and poultry raising complexes is based mainly on the use of model drafts and the fulfillment of the requirements of technological and building norms. At the present time one of the weak links in technological planning is the elaboration of measures and technical decisions on environmental protection. We cannot begin planning for complexes that will pollute fields and reservoirs without developing effective purification structures and without having first foreseen measures dealing with the use of manure sewage and excrement. It is essential to strictly adhere to general union norms for technological planning of systems to remove, process, purify, store, prepare and utilize manure and excrement. Planners and clients

must demonstrate great responsibility in introducing low waste or, if possible, waste-free technology in complexes. Already today we must more extensively plan for the use of by-products such as feathers, down and other wastes as well as for the possibility of producing egg powder in poultry-raising complexes.

In examining the problems related to the blocking of production buildings it should be kept in mind that this can be implemented only up to some sort of optimal level, after which the effect of blocking sometimes becomes negative. It is essential to note that objects having a subsidiary-auxiliary purpose are also subject to blocking. This is very effective economically. The area that is used is decreased by 7-17 percent, the area of outer walls of heated buildings is decreased by 2-17 percent, the number of standard industrial designs decreases by a factor of 2-3.5, the cost of the building decreases by 1.7-6 percent, the energy savings for heating reaches 2-17 percent, and so forth.

As practice shows, individual planning organizations still are not dealing thoroughly with the aforementioned problems, which incidentally do not exhaust the list of shortcomings in the planning of complexes and farms. According to data from the experts' subsection of USSR Glavzhivprom [Main Administration of the Livestock Industry] and USSR Ptitseprom [Main Administration of the Poultry Industry], at the present time an average of over 100 plans for live-stock-raising complexes and farms are examined each year. Of this number, 30 percent are returned for alterations because the given plans do not meet the requirements for technological and building planning and for the preservation of the environment.

There are serious shortcomings in the process of building complexes. Often upon the suggestion of clients and subsidiary organizations alterations are made in finished plans which do not improve and on the contrary, worsen primary decisions and also increase estimated building costs. This results in the necessity of subsequently reconfirming planning-estimate documentation. Unfortunately, many planning organizations do not demonstrate an adequate sense of principle with regard to these problems and in most cases they follow the lead of clients and contract organizations. Thus, in a repeat examination of a plan to expand a complex for fattening hogs from 108,000 to 229,000 head annually in Permskiy Sovkhoz of Perm Oblast the experts discovered an unjustified change in designs of production buildings as requested by the client leading to an increase in building costs of 2.7 million rubles, including 1 million just for substituting duralumin for ferroconcrete screens on manure-removal channels.

Consistent coordinated work by planning organizations, clients, experts' organs and contract workers to eliminate shortcomings in the planning and building of livestock complexes and poultry factories will enable us to significantly improve the quality of planning-estimate documentation.

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TILLING AND CROPPING TECHNOLOGY

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MEASURES FOR COMBATING SUGAR BEET NEMATODE IN KAZAKHSTAN

Moscow ZASHCHITA RASTENIY in Russian No 5, May 84 p 20

/Article by A.O. Sagitov, department head at KazNIIZR: "Beet Nematode"/

/Text/ In recent years, an increase has been noted in the number of beet cyst-forming nematodes (*Heterodera schachtii*) appearing in sugar beets in Kazakhstan. In addition to this crop, the parasite also infects plants of the goosefoot, cruciferae, buckwheat and other families of plants.

The exterior signs of heteroderosis in beets -- retarded growth, a reduction in the number of leaves, their turning yellow in color and disintegration. As a result, a reduction takes place in the assimilation area, photosynthesis is suppressed and changes also take place in the root system; a large number of secondary lateral roots are formed. The female nematodes are quite discernible on these lateral roots, resembling unripe poppy seeds. In the case of severe infestation prior to the end of the growing season, the plants sometimes die off causing bare spots to appear on the fields. Initially these spots are small and yet they increase in size with the passage of time.

The beet nematode leads a stationary life style. A mature female is lemon-shaped, 0.6-0.8 millimeters in length and 0.4-0.5 millimeters in width. The color of the females changes. Initially they are white but subsequently they change to a dark yellow or even brown color. Under the pressure caused by a growing female, the tissue of a root breaks down and the body of the female emerges, leaving behind only its leading end, which is attached to the root. After they have died off, cysts filled with eggs (from 100 to 450) form. Eventually these cysts fall into the soil where the parasitic larvae are preserved for a period of 9 years.

The first moulting takes place in the egg and thus larvae of the second age emerge from the cysts. They enter the roots of the host plant where they feed and grow at an intensive rate.

Over the course of a season, this species produces several generations (up to four in the southern regions). One generation develops over a period of 30-60 days depending upon the temperature and other environmental conditions. The optimum temperature for the parasite is 18-25 degrees.

In order to control infestation by the beet nematode, the plantings of this crop must be inspected constantly and the centers of infection uncovered and eliminated in a timely manner.

Soil fumigants and systemic nematitsides should ideally be employed on limited areas marked by centers of infection, on seed and plant breeding sowings and on strain testing plots. In our experiments carried out in Merkenskiy Rayon in Dzhambul Oblast, an application of DD and Thiazone over a period of 3-4 months maintained the number of the nematodes at an economically acceptable level and promoted a 40 percent increase in the sugar beet yield.

In order to reduce the harm caused by the beet nematode over large areas, considerable importance is attached to growing non-susceptible crops (alfalfa, sainfoin, peas, grain crops and corn) for a period of 4-5 years.

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TILLING AND CROPPING TECHNOLOGY

MEASURES FOR PROTECTING SUGAR BEET CROP DISCUSSED

Moscow SEL'SKAYA ZHIZN' in Russian 17 Apr 84 p 2

Article by V. Zubenko, general director of the Sakhsvekla Scientific Production Association and Doctor of Agricultural Sciences; N. Shapoval, head of an agrotechnical laboratory and Candidate of Agricultural Sciences; N. Barabash, senior scientific worker and Candidate of Agricultural Sciences: "Industry of a Beet Field"/

Text The carrying out of the tasks for sugar beet production, defined for the next few years, is possible only on the basis of a high level of farming culture, complete logistical support for the beet growing farms, skilled machine operators and strict observance of the technological discipline. In other words, we have in mind the mass introduction into operations of an industrial technology. This is the only path to be followed for increasing yields and lowering manual labor expenditures.

The effectiveness of this technology is borne out by the operational results of a number of farms, rayons and production associations in various beet growing zones throughout the country. Thus, at the Zavet Il'icha Kolkhoz in Gorshechenskiy Rayon in Kursk Oblast, 40 tons of root crops were obtained from each hectare last year, with labor expenditures amounting to 87 manhours per hectare. At the Kolkhoz imeni Chapayev in Kochubeyevskiy Rayon in Stavropol Kray the yield amounted to 45.9 tons and labor expenditures -- 85 manhours. On farms of the Sakhsvekla NPO /scientific production association/, the figures were 43.8 tons and 88.6 manhours. It is difficult to mention all of the farms where the growing of sugar beets in accordance with the industrial technology produced yields ranging from 55 to 60 tons. On the average for the country as a whole, use of the industrial technology produced 4.2 additional tons of root crops per hectare and a sharp decline in labor expenditures.

The scientific institutes have developed zonal recommendations which should be used as a guide when taking into account the data obtained from agrochemical inspections of fields. These basic elements of the culture of farming are mentioned in the interest of avoiding a repetition of mistakes.

Beyond any doubt, a pivotal element of the industrial technology is that of sowing. Just as in a focus, the most important aspects of the technology are concentrated in this agricultural operation: varietal peculiarities of a crop and the importance of the seed -- the foundation for obtaining healthy and

complete seedlings and the creation of water-air and nutritional regimes for the soil, which will ensure a high field germinative capacity for the seed and intensive initial growth in the beets. It is at this time that the foundation is laid for high quality mechanized formation of the planting density, for tending the crop and for reducing the losses which occur during the harvest work.

The beet growers are under an obligation to use the seed in a thrifty manner and to eliminate unjustifiably high sowing norms, which lead to increased output costs and which lower the effectiveness of mechanized methods for forming a planting density.

A characteristic of this current year -- a great deficit of soil moisture in all of the beet growing rayons. Thus all of the agrotechnical measures must be directed towards retaining as much of this moisture as possible. Under such conditions, priority importance is attached to the periods for and the quality of the early spring and pre-sowing soil cultivations and to the simultaneous sowing of early grain crops and also to preventing a pause in time from taking place between these technological operations. Early spring loosening and leveling off of the soil will play a role this year only if all operations are carried out rapidly, during the course of a day's time.

The pre-sowing cultivation must be carried out using USMK-5.4A cultivators equipped with sweeps or special blades, which ensure uniform tilling to the seed placement depth. For the purpose of high quality tending, the beets are sown rapidly using the group method, with the groups consisting of 2-3 sowing units, cultivators, pesticide machines and transport vehicles and mechanisms for transporting the seed and mineral fertilizers and mixing them for application to the drill rows. The pre-sowing tilling of the soil and the sowing of the beets on each field must be completed within one to one and a half days, with the units operating at a speed of 4-5 kilometers per hour. Special attention must be given to ensuring that the drill rows are straight and that the width of the inter-row spacings is uniform. This reduces the zone to be protected and it lowers considerably the losses which occur during the harvest work.

In view of this year's spring conditions, the combining of pre-sowing tilling of the soil with the application of herbicides will be extremely effective. Towards this end, use will be made of an assembly consisting of a tractor, a POU machine and a USMK-5.4A (B) cultivator, equipped with markers, a 5.4 meter boom with sprayers, an additional filter and cut-off valves.

The calendar periods for commencing the sowing work differ for the country's various beet growing zones. However, they must be early and they must satisfy the seed requirements for moisture in order to ensure accelerated germination. In combination with increasing the duration of the growing season, this exerts a positive effect on the yields and quality of the root crops. Thus a primary obligation of the farm leaders and specialists is that of not overlooking the optimum sowing periods.

The experience of recent years reveals that quite often the failures which take place within the branch are associated with insufficient attention being given to the density of the plantings. The failure to attach the proper value to

this factor or a neglectful attitude towards the recommendations of scientific institutes in this regard are typical of many beet growing oblasts in the Russian Federation and also some oblasts in the Ukrainian SSR. Analysis reveals mistakes made in the pre-sowing cultivation of soil and low quality sowing -- failure to observe the mandatory requirement for straight rows, as a result of which the sowings become thinned out when loosening the soil in the inter-row spacings and when applying top dressings.

When sowing to the final density and during the course of thinning out the seedlings, when a portion of the plants are planted at converging intervals, there may be instances when the intervals will exceed 30 or more centimeters. This is harmful to a crop. In order to compensate for such an irregularity, the density of the planting must exceed that recommended for the zone, with uniform placement for only 20-25 percent.

Equally important is the need for protecting the seedlings against damage caused by pests and diseases. Thus high requirements are imposed with regard to the readiness of the appropriate services. Those farm leaders and specialists are wrong who rely only upon chemical means and ignore or fail to attach proper value to the agrotechnical methods. The facts indicate that a high degree of weediness in the plantations is one of the more important causes of low yields. This is associated to a considerable degree with a thinning out of the plantations, with a reduction in the role played by agrotechnical measures for combating weeds and with the need for reevaluating the role played by chemical agents.

Agrotechnical measures directed towards maintaining the beet fields in a weed-free state must be carried out in a timely and high quality manner. Pre-seedling harrowing is carried out on the 4th or 5th day following the completion of sowing using assemblies consisting of 2-3 rows of light harrows or light spike-toothed harrows, with the exception of those tracts on which the sowing was carried out to the final density of the stand. The speed of the assembly during pre-seedling harrowing -- 7-8 kilometers per hour. Following the appearance of the seedlings, the mechanized loosening of the soil (blind cultivation) is carried out using USMK-5.4A cultivators equipped with special blades, plant blocker wheels and PB-5.4 rotary gangs.

Following the formation of the planting density, further tending of the crops consists of loosening the soil in the inter-row spacings. The number of tillings and their depth are dependent upon the amount of precipitation, the extent to which the soil is packed and the degree of field weediness. Usually the first two loosenings are combined with applying a top dressing to the beets.

Recent studies have established a high level of effectiveness for combating weeds which appear in the rows and protected zones by covering them over with soil. This requires the use of reequipped plant blocker wheels, sweeps or special paired blades, to the side wings of which small mouldboards are attached. The plant blocker wheels are installed on both sides of a drill row at an angle of 10-12 degrees and to a tilling depth of 4-5 centimeters. The sweep or special paired blade is installed on the leading central holder of the plow beam of a cultivator, for a tilling depth of 8-10 centimeters. During operation, a portion of the loosened soil is moved by the mouldboards into the drill row zone where it covers over the weeds.

Quite often the agrotechnical measures and the chemical agents for combating weeds, applied to the soil prior to sowing the beets, prove to be insufficient. In such instances, Betanal is used on plants which are already growing.

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TILLING AND CROPPING TECHNOLOGY

BRIEFS

SUGAR BEET SEED--The sugar beet seed, the harvesting of which has just been completed on the fields of Kirghizia, is intended for use on the beet plantations in the Altay Kray, the nonchernozem zone and in the Volga region. For the very first time, more than 13 quintals of seed were obtained from each of 8,000 hectares here. The field crop growers are preparing seed for regionalized varieties for each farming zone of the RSFSR. /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 8 Aug 84 p 1/ 7026

SEED FOR REGIONALIZED VARIETIES--Frunze--The sugar beet seed, the harvesting of which has just been completed on the fields of Kirghizia, is intended for use on the beet plantations in the Altay Kray, the nonchernozem zone and in the Volga region. For the very first time, more than 13 quintals of seed were obtained from each of 8,000 hectares here. The industrial technology used by the republic's seed growers for producing seed has proven its worth. This technology is based upon the non-transplanting method for forming plantations and also upon complete mechanization in the tending of the crops. For each farming zone of the RSFSR the field crop growers are preparing seed for regionalized varieties which is distinguished by high yields and a high sugar content. [Text] [Ashkhabad TURKMENSKAYA ISKRA in Russian 9 Aug 84 p 1] 7026

INDUSTRIAL SOWING TECHNOLOGY--Frunze--The beet growers of Kirghizia, who have commenced their mass sowing operations, are introducing an industrial technology into operations on their entire sowing area. They are using only precision drills for placing the seed in the soil and this is eliminating the most labor-intensive process -- thinning out the seedlings. The work is being carried out by enlarged brigades and teams which are operating on the basis of a single order. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 12 Apr 84 p 2/ 7026

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FORESTRY AND TIMBER

USSR TIMBER INDUSTRY MINISTER ON RESOURCE UTILIZATION

Moscow LESNAYA PROMYSHLENNOST' in Russian 11 Aug 84 p 1

[Article by Mikhail Ivanovich Busygin, minister of Timber, Pulp and Paper and Wood Processing Industry: "The Forest and its Riches"]

[Text] At the regular meeting of the Politburo of the CPSU Central Committee a resolution was passed by the CPSU Central Committee and USSR Council of Ministers concerning improving the use of raw timber resources and approval was given to a proposal by the USSR Council of Ministers concerning securing cadres in the timber industry as well as concerning increasing the effectiveness of utilizing wood and its wastes in the national economy. Upon the request of a TASS reporter, M. I. Busygin, Minister of Timber, Pulp and Paper and Wood Processing Industry, discusses how these problems are being dealt with in the branch's enterprises.

The growth in the demand of the national economy for wood and other timber products places before the branch the task of a more rapid and effective transition to an intensive path of development. The resolution that was passed is very important for improving the use of raw timber resources.

Measures have been foreseen for the more efficient utilization of the forest's riches in the European section of the USSR. This should lead to a curtailment of extremely distant and counter-shipments of timber materials and consequently, to decreased expenditures. We intend to pay more attention to those of our timber procurement enterprises, the raw material bases of which have become exhausted with time. Previously, such enterprises were moved to the northern and eastern parts of the country, distances of thousands of kilometers, which meant great expenditures. Today, in addition to the development of timber procurement in the east, there will be a more active expansion than before of the timber raw materials base in the European Ural zone and enterprises permanently involved in the use of timber will be organized. This will increase the return of timber industry enterprises, will help to retain permanent trained cadres there and will curtail expenditures for relocating capacities and for developing them in regions which have not yet been rendered habitable.

Of course a great deal here depends on a business-like and thought-out approach to the restoration of the forest's riches. They will unavoidably grow scarce if they are not restored in time. It is no accident that procurement intensification is coordinated with a complex of measures to reproduce forest resources.

A large role in increasing the work of the branch must be played by developing comprehensive enterprises for the reproduction of forests and the procurement and full processing of all wood. Also of great national economic importance is the building of small-capacity shops at procurement sites for the organization of processing of the wood of leaf-bearing trees for parquet flooring, and of rough procurement for furniture purposes and to meet other needs on the basis of comprehensive wasteless technology.

It is also planned to renovate and increase the capacities of existing enterprises producing slabs made from wood shavings. Serving as the raw material here is industrial chips made from the wastes of the timber and wood-processing industries as well as low-quality wood. The mechanical and chemical processing of wood will be more widely employed. An important goal is to achieve an increase in production output per cubic meter of timber and to develop the production of substitutes for commercial lumber--slabs, plywood, cartons and so forth.

A number of other questions related to improving the effectiveness of utilizing wood in the national economy are being dealt with. For example, it has been proposed to work out measures for the more efficient utilization of low-quality wood by enterprises of the microbiological industry, which could then increase the production of feed yeasts and carbohydrate additives, which are so necessary for the development of livestock raising.

A great deal is being done to equip the branch with modern equipment. Machine-building ministries have been assigned the task of developing technical documentation and of organizing the manufacture of highly productive machines for the continued mechanization of timber procurement and reforestation work.

Of course the successful work of the branch depends to a great degree on securing highly skilled cadres here. This is why supplementary measures have been indicated for preventing turnover of labor in the timber industry.

In other words, a great deal remains to be done to more fully utilize production potential and material, labor and financial resources, to further the growth of labor productivity, to raise the quality and decrease the cost of production, and to renew and increase forest riches. Each of these tasks is important and urgent on its own terms.

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